Internal Review Report of Centre for Polymer Science and Engineering, Indian Institute of Technology- Delhi for the Academic Review

1. Curriculum

1.1 List of degree programmes offered UG + PG and enrolment

M.Tech: 24 (Ist year) +20 (IInd Year)

Ph.D.: 36

1.2 Consistency of curricula with academic vision of the department:

The curriculum in Polymer Science and Technology is consistent with the vision of achieving world class excellence in Research and Teaching.

1.3 Quality of programmes:

A. Periodicity of curriculum review UG and PG: As per Institute guidelines
B. Mechanism for at UG and PG level: as per Institute guidelines
C. Coursework for each review
   UG, PG and Ph.D. programme
   UG: NA
   PG: 42 Credits
   Ph.D.: 12 Credits (for students with M.Sc background) and 6 credits (for students with M.Tech background)
D. Pre Ph.D. courses offered (in last 5 Years): All 700 level courses can be taken as pre-PhD courses by students from different Departments/Centres.
E. New advanced Masters/Pre-Ph.D. courses introduced in last 5 years:
   PTL726: Polymer Nanomaterials and Nanocomposites (3-0-0)
F. Overlap between courses (C) and (D) & (E), including opening latter to UG: All 700 level courses are open to UG and PG students.
G. Seminar series (weekly/regular) held each semester (list): 4 seminars per semester
H. Placement details : See Attachement-1
I. Relevance of UG and PG programmes to recruiters, potential and on-campus recruiters: Students on completion are acceptable to industry, R&D laboratories, International Educational/Research Institutes/ Universities for Jobs, MS and PhD fellowships.
J. Benchmarking of curriculum : See Attachement-2

2. Teaching Environment

2.1 Student-Teacher ratio separately and total for UG, PG, Ph.D. :-
   UG: Nil
   PG: 8:1
   Ph. D.: 8:1

2.2 No. of students graduated in each programme, incl. Ph.D.
   PG: 113 (last 5 years)
   Ph.D.: 20 (Last 5 years)

2.3 Student-T.A. ratio: 10:1

2.4 No. of skilled technical staff: 3

2.5 Gross laboratory space; break up of lab space for core UG/PG teaching:
   ~7000sq. ft. (approx.)

2.6 Laboratory modernization performed in last 5 years for

UG Core: NA

PG Core:

a. Availed FIST grant from DST, New Delhi
b. Installed many new processing and characterization facilities through various sponsored projects such as, Micro Injection Molding Machine, Micro-compounders, Two roll mills, Twin screw extruders, Compression molding machine, Film blowing unit, Micro wave reactor, Glove-box, Universal Tensile testing machine, Aramis- GOM digital image strain set-up, Servo-hydraulic fatigue testing machine, UV-VIS spectrometer, FTIR spectrometer etc.

2.7 Course files for each course for last 5 years: See Attachement-3

2.8 Study materials prepared course wise: NA

2.9 Research and innovations in teaching- learning process:-

a. Use of Power Point Presentations
b. Use of Over Head Projectors

2.10 No. of Students (UG and PG separately) who have spent at least a semester at another University/ institute (overseas or Indian): 6 (PhD) and 6 (MTech)

2.11 No. of students from overseas universities who have taken classes, done project work or internship, UG & PG separately, in the department: 3

2.12 Course feedback : 4.0 or above (as per institute evaluation)

2.13 Industry experts who have delivered lecture(s), seminars, discussions as part of a core/elective course- UG and PG separately. : Nil

2.14 Industry exposure to students- course-related visits to factories, sites, industry exhibitions, field trips,etc. – UG and PG separately:-

a. Plast India Exhibition, New Delhi
b. IOCL, Faridabad, New Delhi

3 Research

3.1 No. of Masters and Ph. D. students supported-

(i) By Institute Assistantship
   a. M.Tech: 113
   b. Ph. D. : 25

(ii) On sponsored projects/consultancies
   Ph. D: 5

(iii) Others sources: 1

(iv) Sponsored by external organizations: 8

3.2 No. of Ph.Ds.enrolled, graduated per faculty for last 5 years:

(a) 7 per faculty enrolled

(b) 4 per faculty graduated

3.3 Areas of research (e.g. areas listed in Prospectus, and others) by : See Attachement-4

3.4 Publications per faculty (average per year for last five years) in academic journals: 7 per faculty per year

3.5 Publications (journal and conference) total and per

(a) Ph.D. student : 2 (Journals) + 2 (Conference)

(b) Masters student : 0.2 (Journals + Conference)
(c) UG student : NA

3.6 Best papers in last 5 years:

(i) Individual best 3: See Attachement-5
(ii) Department/centre best 10; and brief justifications: See Attachement-6

3.7 Average citation per department/centre. :

(a) ~800 citations per faculty (as on date)
(b) ~4000 citations (total for the centre as on date)

3.8 Changes, modifications, etc. done to improve the quality of

M Tech:

(i) Upgraded and introduced new processing facilities such as Micro Injection Molding Machine, Micro-compounders, Two roll mills, Twin screw extruders, Compression molding machine, Film blowing unit, Micro wave reactor, Glove-box, Universal Tensile testing machine, Aramis- GOM digital image strain set-up, Servo-hydraulic fatigue testing machine, UV-VIS spectrometer, FTIR spectrometer etc.
(ii) Introduced new experiments such as composite fabrication, Micro-compounding, Rheomixing etc.
(iii) Introduced new characterization facilities such as Universal Tensile testing machine, Aramis- GOM digital image strain set-up, Servo-hydraulic fatigue testing machine, UV-VIS spectrometer, FTIR spectrometer etc.

Ph.D.:

a. Each student is provided with all processing, , characterization and testing and synthesis facilities
b. Each student is supported to attend one International and one National conference
c. Research scholar room (which also serves as the computer room) with printer facility is made accessible to Ph. D. scholars
d. Each Ph. D. student is rigorously evaluated and progress is periodically monitored by conducting seminars/ presentation etc.

3.9 Sponsored projects–

(i) Individually : 8
(ii) With another faculty of the group/section of the department : 2
(iii) With another faculty of the department but from another group/section of the department: NA
(iv) With another faculty of the another dept./centre:8

3.10 Industry consultancies : 18

3.11 New areas of research which are different from the faculty's PhD thesis area

a. Polymers in fuel cells
b. Solar cells and Blue emitter
c. Self-Healing composites
d. Biodegradable polymers and composites
e. Fracture mechanics of polymers and composites
f. Polymer nanocomposites and nanotechnology

g. Conducting polymers/ composites for EMI shielding applications
h. Smart hydrogels for biomaterial applications
i. Impact toughening of engineering polymers
j. Processing of cellular plastics

3.12 Methodology for

(i) Identifying obsolescence in research areas:-
   a. Global publication statistics
   b. Irrelevance for Market/Industry needs

(ii) Identification of new areas for future research :
   a. Global publication trends
   b. Keeping in view of the demands of the industry and thrust area identified by Government/UN body
   c. Depending on the allocation of grants by sponsoring agency

3.13 Number of large interdisciplinary projects (within department's areas, and across the institute). : 3

4 Innovation, Design and Development

4.1 No. of students who have funded for innovating (TePP, Prism, etc):- NA
4.2 Technology developed (give list and brief information).: 7
4.3 Technology transferred (give list and brief information) : 0
4.4 Number of patents filed and patent granted as a fraction of patents filed : 4
4.5 Innovations of products, processes, designs, etc. in the department :

(a) New material development
(b) Novel synthetic route development
(c) To synthesize, develop and design new polymer based materials for a specific set of applications (Blending/Copolymerizing etc.)

4.6 Availability and access to students workshops, "Tinkering laboratories" so that they may pursue their own ideas : NA

4.7 No. of students/teams who have competed in national/international competitions, and outcome: Students compete in poster/best paper awards in various workshops/conferences.

5 R & D Environment

5.1 No. of post-doctoral scholars hired in the department/centre and their durations, from

(i) Abroad : 0
(ii) On project : 0
(iii) Others and outcomes : 0

5.2 No. of foreign students enrolled in

(i) Masters : 0
(ii) PhD programmes : 1

5.3 No. of Indian and foreign faculty/ researchers who have spent a sabbatical in the department : Nil

5.4 Sabbatical taken by faculty and where spent : 0

5.5 Number of seminars (education and research separately) given by the faculty

(i) In the department : 0
(ii) In other departments: 2

(iii) At other institutions:15

5.6 No. of faculty/ research/ scholars invited by the department for giving

(i) Seminars : 7

(ii) Spending at least a week in the department : 5

5.7 No. of faculty/researchers who visited the department on their initiative for giving

(i) Seminars : 5

(ii) Spending at least a week in the department : 0

5.8 Adequacy of research infrastructure: Inadequate in terms of (a) Scarcity of laboratory space, (b) Shortage of funds, (c) Lack of facilities and (d) Severe shortage of student work space

5.9 Adequacy of technical staff – existing numbers and competency areas in which there is a shortage infrastructure : 3; (No Technical staff in Polymer Processing laboratory which is an area core competency)

5.10 Work space available for

(a) Masters students: NA

(b) Ph.D. students: Specifically not available* (Highly inadequate work space; ~200 sq ft space is shared by ~70 students consisting of both PG and PhD)

(c) Project, staff: NA

(d) Post-doctoral scholars : NA

5.11 No. of national conference/workshops/seminars attended by Ph.D. students (total and per student for 5 years) : Total- 15; Per Student :1 per year

5.12 No. of international overseas conference/workshops/seminars attended by PhD students (total and per student for 5 Years) :

Total - 10 and Per Student - 1

5.13 No. of students who have continued to PhD

(i) In same department/centre : 5

(ii) Others dept. of IITD : 6

(iii) In India: 7

(iv) Abroad (separately for M.Tech. and B.Tech students): 2 per year

5.14 No. of projects with co-guide from industry : 0

5.15 No. of students who have spend time in industry as part of thesis/project work (give number and duration) : 12 students (average duration: 3-6 months)

5.16 Self-assessment reports of the department/ centres/ schools if any :- NA

5.17 Placement of M.Tech. and PhD graduates in technical careers (as per format at Annexure-5): See Attachement-1

5.18 Inter-disciplinary work :

(i) Joint thesis guidance by faculty across groups within a department, or across departments/centres : 6

(ii) Proposals submitted and funded-PI/Co-PI and their group/department affiliations : 7

6 Outreach /External stakeholder engagement

6.1 Educational

a. Workshops/Short term courses – topical research for disseminating research of IITD : 4
b. Workshops/Short term courses – educational methods (teaching, learning resources, pedagogy) : NA
c. Learning, research material on the website : NA
d. Science & technology for public information- on website
   (I) Through Research area displayed in IIT Delhi website
   (II) Through publication/citation report compiled in SCOPUS/ Google scholar/ Research gate.
e. Courses taught to students of other IITs/NITs/Other Institutions: NA
f. Courses taught via NKN : NA
g. Courses developed for NPTEL : NA
h. Books monographs, study material made available to other institutions : NA
i. Experiments developed and made available to other institutions :NA
j. Seminars live/via NKN, web to other institutions in india /abroad : NA
k. Reach out to schools, NCERT, KVs, etc.(e.g. K-12 programmes) : NA
l. Mentoring of other institutions, e.g. new IITs, NITs, universities, etc. including faculty mentoring, curriculum development, laboratory development, etc :- NA

6.2 Industry collaboration

a. No. of students (Ph. D./Masters) directly linked to industry funded projects: 5
b. No. of industry staff/engineers who have taken a regular course (s) for entire semester: 2
c. Technology transfer to companies, entrepreneurs, local and other governments/government agencies, NGOs (separately): NA
d. Continuing education/courses for industry : 1
e. Faculty secondment to industry : NA
f. Research projects undertaken with industry as partner : 4
g. Laboratories, equipment, etc. provided by industry for use in UG/PG teaching laboratories and student projects: Nil
h. Seminars/workshops held with industry by the department: 5

6.3 Professional

a. Service as Board, Senate, selection committee member at other IITs, NITs, and Universities.
   (1) Prof. S. N. Maiti: Member Governing Council-CIPET
   (2) Prof. A. K. Ghosh: Board of Directors, GAIL, India
   (3) Prof. V. Choudhary: Board of Directors, Hi Polymer Laboratory, Faridabad
   (4) Prof. V. Choudhary: Member-Senate, NIT-Srinagar
   (5) Prof. V. Choudhary: Member Selection Committee-DRDO
   (6) Prof. S. N. Maiti: Member Selection Committee-IIT Kharagpur

(7) Prof. S. N. Maiti: Member Selection Committee-DRDO
(8) Prof. S. N. Maiti: Member Selection Committee-IIT Roorkee
(9) Prof. S. N. Maiti: Member Selection Committee-CSIR

b. Service as Ph.D. thesis examiner at other institutions: Number of PhD theses evaluated by faculty members- 30
c. Service as technical expert on committees – MHRD,DST,DSIR,DRDO,Pan-IIT initiatives, other ministries, state and local governments:
(1) Technical Expert: Ministry of Environment and Forests, New Delhi
(2) Technical Expert: Department of Electronics and Information Technology
(3) Technical Expert: SERB-DST, New Delhi
(4) Technical Expert-DSIR, New Delhi
d. Technical expert on policy, regulatory, laws, standards committees: Technical Expert in Bureau of Indian Standards
e. Member of Board/ Advisory Board of public and private sector corporations:
(1) Board Member-GAIL
(2) Governing Council Member-CIPET
f. Positions (e.g. Director, Vice Chancellor, etc.) held by faculty on lien : Nil

6.4 Contribution to national development goals

a. Projects undertaken and their outcome: Nil
b. Policy inputs- implications, visible impact on society : Nil
c. Entrepreneurship development : Nil

6.5 Alumni Engagement

a. Regular interactions/engagement with alumni and outcomes: NA
b. Contributions for alumni :Nil

6.6 Recognitions and Awards

a. Award to faculty:
(I) Reliance Chair Professor- Prof. A. K. Ghosh
(II) Reliance Chair Professor- Prof. V. Choudhary
(III) Max-Planck Research Award-Dr. J. Jacob
(IV) Outstanding Young Faculty Fellowship by Kusuma Trust-Dr. B. K. Satapathy
b. Fellows of academics, INAE:
(a) NASI Fellow, Allahabad- Prof. S. N. Maiti

7 Governance

7.1 Governance

(a) Organization structure – their autonomy/terms of reference:
In descending order of hierarchy: Head→Faculty Incharges for Laboratories →Technical Support Staff→Office staff
(b) Planning documents developed by the department – space, faculty, staff related : See Attachement-7
(c) Records of discussions within the department – internal documents (meeting minutes, position papers, discussion papers, concept papers, etc.) :- Minutes of

Centre Research Committee, Programme Advisory Committee, Programme Executive Committee, Faculty Board, Professorial Committee

(d) Physical resources – percentage utilization for UG, PG core and electives teaching separately, UG and PG student projects, Ph.D. student research: The resource utilization is mainly divided equally to PG core /elective courses teaching, PG Student projects and PhD supervision related activities
Projections for future: 100% enhancement of infrastructure

(e) Financial resources –
  (i) Funds provided to the department: ~80 lakhs per year (Plan and Non-plan budget together)
  (ii) Processes of distribution: - As discussed and approved by Faculty Board
  (iii) Funding for focus areas : 60 lakhs per annum
  (iv) Funding for UG and PG core teaching laboratories: 40 lakhs per year for teaching, Outcomes of funds utilization: Research publication has enhanced, Changes in funding pattern and funds utilization: Funding pattern has boosted the research activity of the centre, Effects on departmental strategy: Projection of funds is decided by faculty board keeping in view of the requirements for the next financial year

(f) Delegation of decision making within department/centre: Centre Research Committee, Faculty Board, Professorial committee, Programme Executive Committee takes collective decision
List the processes and structures for financial and academic management, and the methodology for their review: The academic management is done by Programme Executive Committee

7.2 Department management and operations

(a) Organization structure – mandates, flexibility, etc.: The organizational hierarchy in order is, Head, CPSE, Faculty In-charges-Laboratories, Technical and Support Staff for Laboratories and Office

(b) Processes for curriculum planning: Decided by the Centre Research Committee and Programme Executive Committee

(c) Processes and methods for teaching resources management : Work load distributed among faculty members as per expertise and requirements

(d) Guest faculty, affiliation for teaching core, elective UG & PG courses : NA

(e) Faculty short- listing criteria : See Attachement-8

(f) How collectiveness of the faculty has enhanced academic output and enhanced quality etc.:

(g) Nature, quantum and quality of support from of secretarial staff, stores and inventory management, purchases, ambience, etc : Adequate support

7.3 Faculty

(a) Faculty profile, and a critique of the same: See Attachement-9

(b) Diversity in faculty profile by:
  (i) Gender: 1-F and 4-M
  (ii) Category: General
  (iii) Region: 1-North, 1-South, 3-East
  (iv) Ph.D. institution:

(1) Prof. V. Choudhary, IIT Delhi
(2) Prof. S. N. Maiti, Calcutta University
(3) Prof. A. K. Ghosh, University Suny Bufallo
(4) Dr. J. Jacob, Iowa State University, USA
(5) Dr. B. K. Satapathy, IIT Delhi

(v) Post-Doctoral institutions worked in
(a) Prof. V. Choudhary, Humboldt Fellow, University of Karlsruhe Germany; Rajiv Gandhi Reagan Fellow, Polytechnic University, Brooklyn, USA; Visiting Professor –University of Lund, Sweden
(b) Prof. A. K. Ghosh, University of Pittsburgh, USA
(c) Dr. J. Jacob- Rochester University, USA, Humboldt Fellowship, Max Planck Institute, Mainz, Germany
(d) Dr. B. K. Satapathy- Leibniz Institute of Polymer Research, Dresden-Germany and Friedrich Schiller University, Jena-Germany

(vi) Organizations/ industry worked in: NA
(vii) Employment prior to joining the department: Joined directly after PhD or after Post-Doctoral Fellowship as described above

(c) Procedure for faculty searches: Open advertisement
(d) Result of faculty searches – area- wise, number of applicants, shortlisted and offered a position, their educational qualifications & experience : 4 (shortlisted); 1 (offered)
(e) Success in recruitment (data for last 5 years), and offers that the persons had from other IITs/IIsc/TIFR : 0
(f) Faculty lost to other institutions post selection. : 0
(g) Faculty time utilization – in class, in meetings, project management, Ph.D. guidance, Masters Project guidance, UG project guidance: 40 hours per week
(I) Class: 8
(II) Meetings : 5
(III) Project Management :10
(IV) Ph. D. Guidance :12
(V) Master Project :5
(h) Level of harmony amongst department faculty.: 100%

7.4 Students

(a) Criteria for short-listing and selecting students for admission to Master's and Ph. D. programmes of past 5 years: See Attachement-10
(b) Facilities provided to students and their maintenance/ management system: Maintained by the centre with technical support for trouble shooting
(c) Mentoring seminars/sessions held for Ph.D. students for prospective faculty careers :- Nil

8 Benchmarking

8.1 Identify departments/ centres within IITD as peers:

(a) Department of Textile Technology
(b) Centre for Biomedical Engineering
(c) Department of Chemical Engineering
(d) Department of Chemistry

8.2 Identify departments/centres/schools/divisions from other IITs,IISc, NITs, private universities as peers, and reasons/criteria there for

(a) Material Science Centre, IIT, Kharagpur
(b) Rubber Technology Centre, IIT, Kharagpur
(c) Centre for Composites, IIT Madras
(d) Department of Polymer Engineering, Calcutta University
(e) Institute of Macromolecular Science and Technology, MG University, Kottayam, Kerala
(f) Harcourt Butler Technological Institute, Kanpur
(g) Central Institute of Plastics Engineering and Technology
(h) B. S. Abdur Rehman University, Crescent Engineering College, Chennai

8.3 Identify departments/centres from institutions in other countries as peers:

(a) Department of Polymer Engineering, University of Akron, USA
(b) Department of Polymer Science and Engineering, University of Massachusetts, Lowell, USA
(c) Technical University-Dresden, Germany
(d) Technical University-Aachen- Germany
(e) University of New South Wales, Australia
(f) RMIT University, Melbourne, Australia
(g) University of South Brittany, France

8.4 Define parameters for benchmarking (i) research (ii) curriculum – separately for UG, Masters, and Ph.D.Programmes, (iii) teaching – learning processes: As per institute norms

8.5 Perform benchmarking and report the analysis/ findings for the last 5 years: See Attachement-2

9 Feedback systems and results

9.1 System for feedback from UG students and its results : NA

9.2 System from feedback from PG, Masters and Ph.D., students and their outcome: As per institute rules and practices

(i) System for feedback from recruiters (i) on-campus and (ii) off-campus- separately: The feedback is generally compiled by the Training and Placement cell of the institute.

9.3 Mechanism of obtaining industry feedback and the findings: Not adopted by the centre individually. Industry feed back is mostly sought by the Training and Placement cell of the institute.

9.4 Alumni feedback mechanism and its outcome : NA

9.5 Placement records- Ph.D.,M.Tech and B.Tech: See Attachement-1

10 Vision for next 5-10 years

10.1 Goals and benchmarking for future in relation to

(i) Curricula: Starting a B.Tech programme in Polymer Science and Engineering

(ii)Research: Keeping in view of the demands of the industry and thrust area identified by Government/UN body

(iii) Outreach : Collaboration with industry in process and product developments

(iv) Processes for regular internal assessment :
- (a) Through research Publications
- (b) M.Tech. and Ph. D thesis supervision
- (c) Sponsored project funding
- (d) Teaching activity including laboratory involvement
- (e) Curricular development
- (f) Administration and others

10.2 Vision of curricula and teaching – learning processes- UG, PG and Ph.D.; Innovations proposed. :

(a) To partially web enable the course contents
(b) To display models explaining concepts and processes/
(c) Use of audio visual aids in teaching

10.3 Areas identified for improvement in

(i) Curriculum: Improvements with respect to changing needs and demands of industry and society

(ii) Teaching-learning processes: Adopting audio visual assistance

10.4 New areas for Research and Masters Programme, and industry participation in these **:**

(a) Polymers in Healthcare
(b) Nano-Bio Composites
(c) Polymers in Energy and Environment
(d) Biopolymers

10.5 Projections for

(i) Funded projects: 3 Crores/year

(ii) Journal publications: 5 per faculty per year

10.6 Projected graduation numbers: 10- Ph.D.; 30-M.Tech

10.7 Projected faculty profile, and areas for recruitment of faculty:

(a) PhD in relevant subject with minimum 3 years of Post-Doctoral experience

(b) 5 publications in peer reviewed international journals of repute

10.8 Projections for future benchmarking (for comparison after 5 years) - Institutions in India and abroad and parameters for future comparison: The polymer activity of the institution to be compared with after 5 years is University of Massachusetts-Lowell, USA.

10.9 Infrastructure and governance – limiting factors that affect achievement of

benchmarks and methods to overcome these: Inadequate space, Faculty recruitment, poor infrastructure in terms of facilities

10.10 Working with other departments/centres and institutions in teaching and Research: To promote interdisciplinary research and teaching

10.11 New initiatives that the department/centre will undertake**:**

(a) To start a B.Tech. Programme in Polymer Science and Engineering

(b) To aggressively undertake research and teaching in the area of Energy, Environment, Biodegradability and Healthcare

10.12 Outreach goals and anticipated limitations in the attainment of these: Our goal is to meet the technological demands of the industry and society at large

10.13 Mechanisms for effective changes based on feedback received and development and implementation of corrective measures: Through meetings and deliberations by faculty members

10.14 Questions to which the department seeks answers from the Review Committee:

(a) We expect the review committee to emphasize on the demands by the Centre.

(b) The review committee is also requested to look intospace/infrastructure/manpower needs.

11 Information in public domain

11.1 Minutes of all meetings :Yes

11.2 All reports archived in the central/ department/ centre libraries : Yes

11.3 Past vision documents, review documents, Standing Review Committee documents : Yes

11.4 All other documents developed by the department, a group/section of the department/ centre: Yes

11.5 Feedback documentation and action taken on the same, and its outcome : Yes

List of Attachments

Attachment-1: Details of placement

Attachment-2: Benchmarking of curriculum

Attachment-3: Course files for each course for 5 years

Attachment-4: Research area offered in CPSE

Attachment-5: List of Individual best-3 papers of each faculty

Attachment-6: Best 10 papers from the centre in the last 5 years

Attachment-7: Planning documents for space

Attachment-8: Faculty short listing criteria (From professorial committee minutes)

Attachment-9: Faculty Profile-Faculty Information

Attachment-10: M.Tech./Ph.D. short listing criteria (From CRC minutes)

Attachment: - 1

Mtech Students	
2011 Entry	
Name	**Current Position**
SHRUTI AWASTHI	
NITESH KUMAR RAY	Ph.D.
SAYANTANI BASU .	Ph.D.
MOUSUMI BOSE .	Ph.D.
RESHU TYAGI .	Ph.D.
PRADIPTA KUMAR DAS .	Ph.D.
SOUMYAJIT BASU .	Saint Gobain
V VIGNESH .	Ph.D.
JYOTI SHARMA.	Ph.D.
ANINDYA DUTTA .	Ph.D.
SINDHU K P .	Teaching Job
SALEHEEN BANO .	Ph.D.
K SUSI .	Teaching Job
SATHISH KUMAR .	Govt. Job
SAURAJ .	Ph.D.
MONIKA .	Ph.D.
DARADMARE SNEHA BHIMRAO .	Ph.D.
KISHOR BISWAS .	Ph.D.
ANIL KUMAR .	Ph.D.
M MORONSHING .	Ph.D.
ANUBHA GUPTA .	
ABHISHEK KUMAR .	Ph.D.
AMITA MISHRA .	
PARUL SACHDEVA .	Reliance
MOHAMMAD ADIL AFROZ .	Ph.D.
NILESH RAMESH BAKARE .	Job
TARUN VERMA .	Relaxo
2010 Entry	
Name	**Current Position**
SAMPAT SINGH CHAUHAN	Ph.D.
NANDINI MEHTA	Teaching
AMIT GUPTA	Job
CHARU GUPTA	Job Thai Acrylics
DIPANJAN SAHA	Job Dow

RAMESH KRISHNAN R	Ph.D.
AVINASH TIWARI	Job SKF
HARSHITA	Ph.D.
ARUN KUMAR	Ph.D.
LARRY PHILIPPOSE	Job
SANTOSH KUMAR	Ph.D.
SARANYA S	Job
YAMEENI SAROTHIA	Job
SHAHAR P S	Job
NITIN RATHEE	Job
RAVI	Job
MANSI GUPTA	Job
GARIMA CHAUDHARY	
SHIB SHANKAR BANERJEE	Ph.D.
VISHWA PRATAP SINGH	Ph.D.
KUSUM LATA	
JAGANNATH CHANDRA	Ph.D.
S.SABAPATHY	Ph.D.
DEBANGA BHUSAN KONWAR	Ph.D.
ALKA KASANA	
DANODIYA ASHISHKUMAR HARIKISHAN	Job
INDU	Teaching Job

2009 Entry

Name	**Current Position**
SANANDA NAG	Ph.D.
SUVAM NAG CHOWDHURY	Ph.D.
RICHKANT	Ph.D.
HARJEET SINGH JAGGI	Ph.D.
PARAMITA DAS	Ph.D.
ACHLA	Ph.D.
INDU PANWAR	Teaching Job
KAUSTAV GOSWAMI	Ph.D.
BINDU MANCHANDA	Ph.D.
SANJUKTA BOSE	Ph.D.
ABHISHEK GANDHI	Ph.D.
RANJANA NEHRA	Ph.D.
ABHILASHA KANWAR	
HEMLATA UJJWAL	Job
KUMARI RAGINI	Job
VED PRAKASH	Job

YOGESH KUMAR	Job
PAWAN VERMA	Ph.D.
RAJENDRA KUMAR	Ph.D.
JUBARAJ BHATTACHARYA	Job
SHALINI SINGH	
DEEPIKA MALPANI	Job
RANGKSAN MAWROH	Job

2008 Entry

Name	**Current Position**
INDRANIL BANERJEE	Job
RAJDEEP MAJUMDER	Job
SOUMYADIP CHOUDHURY	Ph.D.
GARIMA AGRAWAL	Ph.D.
DIBYENDU DAS	Ph.D.
ANKUR SINGH	Job
ASTHA GARHWAL	Ph.D.
HARPREET KAUR	Teaching Job
NARESH KUMAR SHARMA	Job
JITENDER KUMAR	Job
MEENAKSHI	Ph.D.
KM.PRIYA	Ph.D.
SURESH PRASAD KHARWAR	Job
ARIJIT DAS	Job
RAJNEESH KUMAR SRIVASTAVA	Job
ABHA MISHRA	Job
PUSHPENDRA KUMAR SHARMA	Job

2007 Entry

Name	**Current Position**
POOJA MITTAL	
PRIYA DWIVEDI	Job
GARIMA VERMA	Job
POONAM CHETANI	Job
MOHAMMAD TAHIR ZAFAR	Ph.D.

CHAINIKA JANGU	Ph.D.
DEEPLATA	Job
SUNIL KUMAR	Ph.D.
MITU ARORA	Job
NANDAN N DADKAR	Job
GOPALA RAM BHADU	Job
ARUN KUMAR	Ph.D.
VARTIKA JOSHI	Job
MANISHA GUPTA	Ph.D.
SYED JAVED AHMAD RIZVI	Ph.D.

Attachment-2

REVIEW OF THE DEPARTMENT/CENTRE/SCHOOL

BENCHMARKING OF CURRICULUM

(Data for last 5 years)

Institutions, Universities Identified for benchmarking

Peer group:

India:

1. 2 old IITs IIT Kharagpur, Material Science and Engineering.

IIT Kharagpur,Rubber Technology Centre.

2. 1 new IIT IITRoorkee, Department of Pulp and Paper Technology (Integrated M. Tech)

3.1 NIT Central Institute of Plastics Engineering and Technology

4. 1 Private B.S. Abdur Rahman Crescent Engg. College, Chennai

(Polymer Technology B.Tech)

Overseas:

1. 1 Top 10 UMass Lowell, USA(Polymer Science and Engg.)

2. Ranked 10-50The University of Akron, USA (College of Polymer Science and Polymer Engg.)

3.1 Top from China:Sichuan University,China (College of Polymer Science and Engg.)

4.1 Top from Brazil:Federal University of Rio de Janeiro, Brazil (Polymer Science and Technology).

Benchmarking parameters

Total credit requirement 60 M.Tech, PhD.-12 (for MSc background), 6 (for M.Tech background)

Core credits 24

Elective credits 18

Core credits as % of total credits 40%

Comparison of core courses across institutions: Comparative

Text books used in core courses: John Brydson, G. Odian, P.J. Flory, M Morton,A L Mils & Pro

No. of assignments submitted by students: 3

No. of theory courses in core curriculum: 7

Nos. and nature of laboratories: 2 (Polymer Chemistry and Polymer Engineering)

Thesis requirement: 18 Credits

Important differences with peers: M.Tech projects are fully fledged research projects/Industrial

Maths requirement in Masters Courses: Bachelor level-Engineering Maths

Ph.D. course-work requirement and typical actual course work:12 (MSc) + 6 (M.Tech)

Ph.D. requirement of publishing a paper: 1 paper in peer reviewed international/national journal

Ph.D. teaching requirement: 2 hrs /student /week (avg.)

Inter-disciplinary /breadth requirement for masters: 6 credits for outside course mandatory

Inter-disciplinary /breadth requirement for Ph.D.: Open to all

Attachment-3

PTL701 Polymer Chemistry

3 credits (3-0-0)

General characteristics of chain growth polymerisation, alkene polymerisation by free radical, ATRP anionic and cationic initiators, ring opening polymerization of ethers, acetals, lactones, lactams, copolymerisation, cyclopolymerisation, metathesis polymerisation.

General characteristics of step growth polymerisation, synthesis by step polymerisation - polyesters, polycarbonates, polyamides, heteromatic polymers, polysiloxanes, liquid crystalline polymers.

PTL702 Polymer Processing

3 credits (3-0-0)

Classification of polymer processing operations. Simple model flows for analysing processing operations with examples. Extrusion and extruders. Calendering; Roller & blade coating; Film blowing. Fibre spinning. Injection moulding, blow moulding, thermoforming, rotational moulding. Compression and transfer moulding. Reaction Injection moulding. Compounding and mixing. Twin screw extruders, Banbury and other mixing equipments in polymer processing. Reactive processing.

PTL703 Polymer Physics

3 credits (3-0-0)

Polymer molecules, their classification, structure and conformations. Elasticity of isolated polymer chain and of the network. Rubber elasticity. Glass Transition: its measurement, effect of various parameters on it, theoretical interpretations. Structure of namorphous phase in bulk polymers. Two-phase structure of semicrystalline polymers and its characterisation & correlation with properties. Crystal morphologies: extended chain crystals, chain folding, lamellae, spherulites. Concept of unit cell, crystallite size and long period. Crystallization and its kinetics: Avrami equation: Melting: determination of melting point and the effects of various parameters on melting.

PTL705 Polymer Characterisation

3 credits (2-0-2)

Polymer solution thermodynamics. Molecular weight and molecular dimensions by end group analysis, osmometry, light scattering, viscometry, gel permeation chromatography. Infra- red, NMR, UVvisible,Raman Spectroscopy techniques. Thermal properties by differential scanning calorimetry, differential thermal analysis, thermogravimetry. Microscopy: optical and electron microscopy, Xray scattering from polymers, small angle light scattering. Crystallinity by density measurements.

PTL706 Polymer Testing and Properties

3 credits (3-0-0)

Properties of polymer and their measurement by standard test methods: tensile, flexural and impact properties.Hardness, abrasion resistance, long-term fracture tests, etc.Softening point, heat distortion temperature, melt flow index, mouldability and flow temperature.Various standard specifications: BIS, BS, ASTM, ISO, and DIN etc.· Correlation of tests with actual performance. Statistical quality control in various tests.

PTL707 Polymer Engineering and Rheology

3 credits (3-0-0)

Introduction and definitions related to fluid flow. Relationships describing continuity, dynamic and constitutive equations, deformation tensor. Simple shear flow and its application for measurement of viscosity as well as normal stresses. Simple elongational flow and its significance. Dynamic flow behaviour, time dependent fluid responses.

Newtonian, non-Newtonion and viscoelastic fluids. Continuum theories and related models. Molecular, theoretical and related models.

Relationships of various approaches taken in describing the viscous and elastic properties.

PTL709 Polymer Technology

3 credits (3-0-0)

Polymers of commercial importance. Additives for plastics: stabilizers, fillers, plasticizers, lubricants, flame retarders, foaming agents, crosslinking agents, etc. Manufacture, properties and applications of major thermoplastic and thermosetting polymers: polyethylene, polypropylene, polyvinyl choloride, polystyrene and other styrenics, polyamides, polyesters, phenolformaldehyde, urea and melamine - formaldehyde, unsaturated polyester, epoxy resins.

PTP710 Polymer Science Laboratory

2 credits (0-0-4)

Experiments: a) Polymer chemistry: identification of polymers, preparation of modified cellulose, thermosetting resins, suspension polymerization of styrene, emulsion polymerization of vinyl acetate and butyl acrylate, bulk and solution polymerization of methyl methacrylate, preparation and testing of epoxy reins, unsaturated polyester resin technology, preparation of nylon 6 and nylon 10 by interfacial polymerization, copolymerization and determination of reactivity ratios, preparation of polyvinyl alcohol, preparation of polyvinyl butyral. b) Polymer physics experiments on polymer characterization

PTL711 Engineering Plastics and Speciality Polymers

3 credits (3-0-0)

Definition. Characteristics of engineering plastics. Important engineering thermoplastics such as acrylics, ABS, polyesters, polycarbonate, polyamides, polyurethanes, polyphenylene oxide, polyphenylene sulfide, PEEK and Engg. Thermosets such as USP, Epoxy, phenolics and aminoplasts. Materials selection for engineering plastics for various application based on mechanical properties. High temperature stability, electrical properties, oxidative, UV, hydrolytic andm chemical stability. Processing and application of engineering plastics. Definition and characteristics of speciality polymers. Important speciality polymers such as fluropolymer, silicone, liquid crystalline polymers, conducting polymers, polymeric hydrogels. Processing and application of speciality polymers.

PTL712 Polymer Composites

3 credits (3-0-0)

Definition and Classification of Composites Reinforcing fibres-Natural fibres (cellulose, jute, coir etc), boron, carbon, ceramic glass, aramids, polyethylene (UHMWPE), polybenz-thiazoles etc. Particulate fillers-importance of particle shape an size. Matrix resinsthermoplastics and thermosetting matrix resins. Coupling agentssurface treatment of fillers and fibres, significance of interface in composites. Nanocomposites, short and continuous fibre reinforced composites, critical fibre length, anisotropic behaviour, SMC, BMC, DMC etc. Fabrication techniques-pultrusion, filament winding, prepreg technology, injection and compression moulding, bag moulding, resin transfer moulding, reaction injection moulding. Properties and perfor mance of composites. Applications.

PTL714 Polymer Blends and Alloys

3 credits (3-0-0)

Definition of polymer blends and alloys. General behaviour or polymer mixture. Thermodyamics of polymer blends. Miscibility of polymers. Immiscible blends and compatibilization. Morphology and dispersion of immiscible blends, phase separation. Melt rheology of multiphase blends. IPN, thermoplastics elastomers, reaction blending and processing. Specific polymer blends, their propertiesand application. Case studies.

PTL716 Rubber Technology

3 credits (3-0-0)

Rubber and elastomers, compounding and vulcanization, mastication, fillers reinforcing and non-black (loading type). Other compounding ingredients: peptizers, vulcanizing agents, accelerators, accelerator activator, softeners, anti aging additives, miscellaneous additives:colorant, flame retarders, blowingagents, deodorants, abrasive, retarders etc. Atmospheric Sciences 195 Processing and vulcanization test. Vulcanization theory and technology. Natural rubber and synthetic rubbers: styrene butadiene rubber, polybutadiene and

polyisoprene rubbers, ethylenepropylene rubber, butyl and halobutyl rubber, nitrile and silicone rubber, thermoplastics elastomers, latex and foam rubber. Acrylate and fluoro elastomers.

PTL718 Polymer Reaction Engineering

3 credits (2-1-0)

Polymerisation kinetics for both step growth as well as chain growth mechanism under ideal and real conditions. Chain growth includes free radical, anionic and cationic polymerisation. Prediction of molecular weight distribution for polymerisation conducted in batch reactors, continuous stirred tank reactors, plug flow reactors, comparison between batch and continuous system, the effect of mixing on kinetics and mwd, considerations for reactor design for commercial use.

PTP720 Polymer Engineering Lab

1 credit (0-0-2)

(a) Processing experiments: compounding of additives on two rollmill/ twin screw extruder, compression moulding, injection moulding, single screw and twin screw extrusion, thermoforming, melt flow index measurement, mixing in HAAKE rheomix, melt rheology on rheometers, mechanical proportion of polymers, mould flow demonstration.

(b) Industry visit for demonstration of specific processing and testing operations.

PTL720 Polymer Product and Mould Design

3 credits (2-0-2)

Fundamentals of plastic moulding. Plastics product design. Type of moulds, tool making processes, equipment and methods. Materials for mould making designing and drafting practice. Design details for compression moulds, transfer moulds, blow and extrusion dies, typical excersises in mould design and production.

PTL722 Polymer Degradation and Stabilization

3 credits (3-0-0)

Principles of thermal, photo, oxidative and biodegradation in polymers. Methods/equipments used for monitoring the degradation in polymers. Mechanism of degradation of some commercial polymers. Biodegradation of polymers. Waste Management.

PTL724 Polymeric Coatings

3 credits (3-0-0)

Introduction and mechanism of adhesion of polymeric coatings on various substrates. Solvent based polymeric coatings. Water based polymeric coatings. UV and EB curable coatings. 100% convertible coatings. Selection criteria of coatings for various substrates. Health, safety hazard and environmental aspects of coatings during manufacturing and applications.

PTL726 Polymeric Nanomaterials and Nanocomposites

3 credits (3-0-0)

Introduction to general aspects of nanostructured materials, e.g. nanocomposites, block copolymers, Interaction parameter, phase behaviour morphology and phase diagrams, microphase separation transition. Polymer nanocomposites: technical challenges and understanding of interfacial dynamics using LJ Potential and many body problems approach. Nanoreinforcements eg. Nanoclay, POSS, carbon nanostuctures and nanoparticles. Dispersion and percolation: influence of size, shape and diameter of nanotubes, functionalization of nanoparticles and nanoplatelets.

Name of the M.Tech. Programme	Polymer Science and Technology

Distribution of Total Credits

Program Code (PC)	Program Elective (PE)	Open Elective (OE)	Total Credit
42	12	6	60

Scheduling of Courses

S.No.	Course No.	Title	Type	L-T-P	Credits
		Semester I			
1.	PTL 701	Polymer Chemistry	PC	3-0-0	3
2.	PTL 703	Polymer Physics	PC	3-0-0	3
3.	PTL 705	Polymer Characterization	PC	2-0-2	3
4.	PTL 707	Polymer Engineering & Rheology	PC	3-0-0	3
5.	PTL 709	Polymer Technology	PC	3-0-0	3
6.	PTP 710	Polymer Science Lab	PC	0-0-4	
7.		Open Elective**	PE	3-0-0	2
		Total Credits	-	-	17/20
		Semester II			
1.	PTL 702	Polymer Processing	PC	3-0-0	3

2.	PTL 706	Polymer Testing & Properties	PC	3-0-0	3
3.	PTL 720	Polymer Engineering Lab	PC	0-0-2	1
4.		Programme Elective 1	PE	3-0-0	3
5.		Programme Elective 2	PE	3-0-0	3
6.		Programme Elective 3	PE	3-0-0	3/4
7.		Open Elective 1	OE	3-0-0	3
		Total Credits	-	-	19/20
		Semester III			
1.		Programme Elective 4	PE	3-0-0	3
2.	-	Open Elective 2	OE	3-0-0	3
3.	JPD 801	Major Project-1	PC	0-0-12	6
-	-	Total Credits	-	-	12
		Semester IV			
1.	JPD 802	Major Project- Part 2	PC	0-0-24	12
-	-	Total Credits	-	-	60

List of Program Electives for M.Tech Programme

S.No.	Course No.	Title	L-T-P	Credits
1.	PTL 711	Engineering Plastics & Speciality Polymer	3-0-0	3
2.	PTL 712	Polymer Composites	3-0-0	3
3.	PTL 714	Polymer Blends & Alloys	3-0-0	3
4.	PTL 716	Rubber Technology	3-0-0	3
5.	PTL 718	Polymer Reaction Engineering	2-1-0	3
6.	PTL 720	Polymer Product & Mould Design	2-0-2	3
7.	PTL 722	Polymer Degradation & Stabilization	3-0-0	3
8.	PTL 724	Polymeric Coatings	3-0-0	3
9.	BML 820	Bio Materials	3-0-0	3
10.	BML 710	Industrial Biomaterial Tech.	3-0-0	3
11.	BML 830	Biosensor Technology	3-0-2	4
12.	MEL 791	Composite Materials and Processing	3-0-2	4
13.	MEL 792	Injection Moulding & Mould Design	2-0-2	3
14.	CYL 716	On line Methods of Chemical Analysis	3-0-0	3
15.	CYL 704	Chemical Computations	2-0-2	3
16.	ITL 705	Material for Tribo-Applications	3-0-0	3
17.	DIP 752	Computer Aided Product Design	1-0-4	3
18.	AML 705	Finite Element Methods	3-0-2	4
19.	BEL 708	Bioseparation	3-0-4	5
20.	CHL 701	Process Engineering	3-0-2	4
21.	CHL 603	Advanced Transport Phenomena	3-0-0	3
22.	CHL 723	Chemical Reaction Engineering	3-0-0	3
23.	CH 726N	Fluid Flow in Process Equipments	3-0-0	3
24.	CHL 724	Environmental Engineering & Waste Management	3-1-0	4
25.	CHL 743	Petrochemical Technology	3-0-0	3
26.	JPD 799	Minor Project	0-0-6	3
27.	JPS 800	Independent Study	0-3-0	3

Attachment-4

RESEARCH

Research in polymer synthesis, modification of polymers, biodegradable/photodegradable polymers, nano-Composites, flame resistant polymeric materials, high energy polymeric binders, reinforcement of polymers, testing and characterization of polymers, polymer blends and alloys, polymer compounding, rheology and polymer processing, nano-Hybrid polymer particles as drug carries, smart hydrogels, biopolymers, polymer composites, polymer product design and modelling and simulation in processing is being carried at the Centre. Sponsored research and consultancy are other major activities of the CPSE. Very large number of research projects sponsored by government organization, international agencies and industries has been undertaken over two decades.

LABORATORY FACILITIES

Laboratories of CPSE are well equipped with various sophisticated instruments in the area of Polymer Synthesis, Characterization, Testing, and Processing. The facilities include Optical Microscopes, FTIR Spectrophotometer,Zwick MTS, Differential Scanning Calorimeter, ThermogravimetricAnalyzer, Capillary Rheometer, Rotational Rheometer, Twin screw Extruders, Compression Moulding Machine, Injection Moulding Machine, Blow Moulding Machine, Micro Injection Moulding, Polarising Microscope, Two Roll Mill, Thermoforming Machine, Tool Grinding Machine, Mettler Hot Stage, Brookfield Viscometer, Small Angle Light Scattering Set up with Laser Source, Instrumented Impact Tester (Falling Dart Type), Impedance Analyser, Lab scale Film Blowing Unit, HaakeRheocord, Charpy and Izod Impact tester, Melt Flow Indexer, Gel Permeation Chromatograph, Dynamic Mechanical Analyser, Mold Flow 3D Analysis

Ph. D. Research Areas

Synthesis of Speciality Polymers; Structure-Property Correlation in Polymeric Materials; Rheology and Processing of Polymers; Polymer Blends and Alloys; Fibre/Particulate Filled Thermoplastic/Thermoset Composites, Degradation and Stabilization of Polymer; Mechanical and Thermal Properties of Polymeric Systems, Crystallization of Polymers in Blends/Composites, Reactive Polymer Processing; Modification of Polymers; Morphological Studies of Polymers; Modelling and Simulation in Processing; Computer Analysis of Mould Filling; Design and Stress Analysis of Engineering Component from Polymeric Materials, Biodegradable Polymers, Hydrogels, Smart Micro/Nano-Hydrogels for Biomedical Application, Nano- Composites, Conjugated Materials for Electronic Applications, Polymerisation Catalysts, Fracture and Fatigue of Nano-Structured Polymeric Materials,

Attachment-5

List of Individual Best-3 papers by Faculty

Prof. V. Choudhary

1. Parveen Saini, **Veena Choudhary** and S.K. Dhawan, **"**Improved microwave absorption and electrostatic charge dissipation efficiencies of conducting polymer grafted fabrics prepared via in situ polymerization" **Polymers for Advanced Technologies,** 23, 343, and 2012.

2. Anju Gupta, **Veena Choudhary**,"Electrical conductivity and shielding effectiveness of poly (trimethylene terephthalate)/multiwall carbon nanotube composites" **Journal of Materials Science,** 46, 6416, 2011.

3. Deeksha Gupta, **Veena Choudhary**, "Effect of functionality of polyhedral oligomeric silsesquioxane [POSS] on the properties of sulfonated poly (ether ether ketone) [SPEEK] based hybrid nanocomposite proton exchange membranes for fuel cell applications" **International Journal of Hydrogen Energy,**38, 12817, 2013.

Prof. S. N. Maiti

1. G. P. Balamurugan, S. N. Maiti, "Non-isothermal crystallization kinetics of PA6/ethylene-co-butylacrylate blends", Journal of Applied Polymer Science, 107 (2008) 2414-2435.
2. N. Tomar, S. N. Maiti, "Morphology and mechanical properties of PBT/fluoroelastomer blends", Journal of Polymer Research, 15 (2008) 37-45.
3. G. P. Balamurugan, S. N. Maiti, "The influence of reactive compatibilization of uni-axial large strain deformation and fracture behavior of polyamide6/polyethylene-co-butylacrylate blends", Polymer Testing, 27 (2008) 752-764.

Prof. A. K. Ghosh

4. Priyanka Singh, A.K. Ghosh , "Torsional, tensile and structural properties of acrylonitrile–butadiene–styrene clay nanocomposites" Materials & Design Volume 55 page 137-145, 2014
5. Jutika Goswami,A.K. Ghosh Naresh Bhatnagar, S. Mohanty, "Processing and Characterization of Poly (Latic acid) based bioactive composites for biomedical saaffold application" Express Polymer Letter Vol7 page 767-777, 2013
6. M H Alaei, R Kumar, P. Mahajan, P Singh, A K Ghosh, N Bhatnagar, " Design and Development of an Offset Lightweight Polymeric Orthotic Knee Joint for Polio and Cerebral Palsy Patients" Indian Journal of Biomechanics , Volume 4, page 1-6, 2013.

Dr. J. Jacob

7. R. C. Gonzalez-Cano, G. Saini, J. Jacob, J. T. L. Navarrete, J. Casado, M.C. Delgado "Interplay of α,α- versus α,β- conjugation in the excited states and charged defects of branched oligothiophenes as model compounds for dendrimers", Chemistry: A European Journal, 2013, 19, 17165-17171.
8. M. Tomar, N. T. Lucas, K. Muellen, J. Jacob, "Facile synthesis and coupling of 3,9-dibromo-6-aryl-5H-dibenzo[d,f][1,3]diazepine derivatives". Tetrahedron Letters, 2013, 54, 5883-5885.
9. S. Dhamaniya, J. Jacob, "Synthesis and characterization of polyesters based on tartaric acid derivatives" Polymer, 2010, 51, 5392-99.

Dr. B. K. Satapathy

10. D. Das, B.K. Satapathy, Designing tough and fracture resistant polypropylene/multi wall carbon nanotubes nanocomposites by controlling stereo-complexity and dispersion morphology, Materials & Design, 54 (2014) 712-726.
11. N. Dayma, S. Kumar, D. Das, B.K. Satapathy, Melt-mixed PA-6/LDPE-g-MA/nanoclay ternary nanocomposite: Micro-mechanisms from post-yield fracture kinetics and strain field analysis, Materials Chemistry and Physics, 142 (2013) 640-650.
12. S. Kumar, B. Satapathy, A. Patnaik, Viscoelastic interpretations of erosion performance of short aramid fibre reinforced vinyl ester resin composites, Journal of Materials Science, 46 (2011) 7489-7500.

Attachment-6

List of 10 best papers from CPSE in last 5 years

1. Anju Gupta, **Veena Choudhary**,"Electrical conductivity and shielding effectiveness of poly (trimethylene terephthalate)/multiwall carbon nanotube composites" **Journal of Materials Science,** 46, 6416, 2011.

2. Deeksha Gupta, **Veena Choudhary**, "Effect of functionality of polyhedral oligomeric silsesquioxane [POSS] on the properties of sulfonated poly (ether ether ketone) [SPEEK] based hybrid nanocomposite proton exchange membranes for fuel cell applications" **International Journal of Hydrogen Energy,**38, 12817, 2013.

3. G. P. Balamurugan, S. N. Maiti, "Non-isothermal crystallization kinetics of PA6/ethylene-co-butylacrylate blends", Journal of Applied Polymer Science, 107 (2008) 2414-2435.
4. N. Tomar, S. N. Maiti, "Morphology and mechanical properties of PBT/fluoroelastomer blends", Journal of Polymer Research, 15 (2008) 37-45.

5. Priyanka Singh, A.K. Ghosh , "Torsional, tensile and structural properties of acrylonitrile–butadiene–styrene clay nanocomposites" Materials & Design Volume 55 page 137-145, 2014

6. Jutika Goswami,A.K. Ghosh Naresh Bhatnagar, S. Mohanty, "Processing and Characterization of Poly (Latic acid) based bioactive composites for biomedical saaffold application" Express Polymer Letter Vol7 page 767-777, 2013

7. R. C. Gonzalez-Cano, G. Saini, J. Jacob, J. T. L. Navarrete, J. Casado, M.C. Delgado "Interplay of α,α- versus α,β- conjugation in the excited states and charged defects of branched oligothiophenes as model compounds for dendrimers", Chemistry: A European Journal, 2013, 19, 17165-17171.

8. M. Tomar, N. T. Lucas, K. Muellen, J. Jacob, "Facile synthesis and coupling of 3,9-dibromo-6-aryl-5H-dibenzo[d,f][1,3]diazepine derivatives". Tetrahedron Letters, 2013, 54, 5883-5885.

9. D. Das, B.K. Satapathy, Designing tough and fracture resistant polypropylene/multi wall carbon nanotubes nanocomposites by controlling stereo-complexity and dispersion morphology, Materials & Design, 54 (2014) 712-726.

10. N. Dayma, S. Kumar, D. Das, B.K. Satapathy, Melt-mixed PA-6/LDPE-g-MA/nanoclay ternary nanocomposite: Micro-mechanisms from post-yield fracture kinetics and strain field analysis, Materials Chemistry and Physics, 142 (2013) 640-650.

ATTACHMENT-7

Dept.: Polymer Sci. & Engg.
संदर्भ सं./Ref. No. 20.12.CPSE.594
दिनांक/Date 12.7.2012

CENTRE FOR POLYMER SCIENCE AND ENGINEERING

11th/12th July, 2012

Subject: Ref. No. IITD/Ch.E&W/Space/2012/8091 dated 28.06.2012

With reference to your above letter, the details of space occupied by the Centre for Polymer Science and Engineering are given below:

1.	Faculty Space	~1400 sq. ft.
2.	Research and Teaching Labs	~4300 sq. ft.
3.	Office, Store, Library etc.	~900 sq. ft.
4.	Student Space	~400 sq. ft.
	Total	~7000 sq. ft.

(Prof. A.K. Ghosh)
Acting Head, CPSE

file

To

Chairman, Estate & Works

Space

Space

The Institute is in the process of framing guidelines for space allocation for the Departments and Centres. Your Department/Centre currently is occupying 2713 sq ft area. Please let us know the split of this area in the following categories :

Purely Research Labs.	UG Teaching Labs.	PG Teaching Labs	Overlapping Research Labs with Teaching Labs.
7	1	2	4300 sq ft

This information will help us to understand the requirements of different Departments/Centres.

Please also provide the list of courses which use the UG Teaching and PG Teaching Labs.

Hoping for your cooperation. The information should be provided at the earliest but not later than Tuesday, the 15th January, 2012.

(S.N. Singh)
Deputy Director (Operations)

All Heads of Departments/Centres

Head, CPSE

16/1/13.

Dr. S.N. Singh

Head, CPSE

With reference to your above letter the details of space occupied by the Centre For Polymer Science and Engineering are given below:

1	Faculty Space	1400 Sq. ft.
2	Research & Teaching Labs	4300 Sq. ft.
3	Utility Space (Office, library, Store etc)	0900 Sq. ft.
4.	Student Space	0400 Sq. ft.
	Total	7000 sq. ft.

The above totality is available at single place and being used optimally.

25/9/12

(Prof. Veena Choudhary)
Head

To
Er. K.M.Vijaya Kumar
Executive Engineer(P)

ATTACHMENT-8

Centre for Polymer Science and Engineering

Date: 17/4/2013

Sub: Shortlisting criteria for the selection of Assistant Professors in CPSE.

Please find enclosed Form No. FAC/5D regarding the above along with the minutes of the Professorial Committee.

(Prof. S.N. Maiti)
Head CPSE

Dean, Faculty

Centre for Polymer Science and Engineering

Date: 16/4/2013

Sub: Minutes of the Professorial Committee meeting held on 15.4.2013 at 4 p.m. in the office of Head, CPSE for shortlisting of candidates for the post of Assistant Professors in CPSE.

The following members were present:

1. Prof. S.N. Maiti, (Head CPSE)	Chairperson.
2. Prof. A.K. Ghosh, CPSE	Member.
3. Prof. A.N. Bhaskarwar, Chemical Engg.Deptt.	Member
4. Prof. Harpal Singh, CBME	Member

Prof. Veena Choudhary could not attend the meeting being on SCL visiting abroad.

1. Shortlisting criteria for the selection of Assistant Professors

Alongwith the general criteria of the Institute, additional criteria for CPSE decided were as under:

Assistant Professor

i) CGPA 8/10 or 75% marks in the last qualifying examination (M.Tech., M.Sc., B.Tech.)

ii) Must have M.Tech. in Polymers/Plastic Tech./ Rubber Tech., Material Science (Polymer/Plastics specialization) for candidates with science background or M.S. leading to PhD.with proof of undertaking 5 polymer courses.

ii) 5 publications in reputed refereed journals, at least 2 in the last 3 years.

The meeting ended with a vote of thanks to the Chair.

(Prof. S.N. Maiti)
Head CPSE

Short-listing criteria used by department/Centre/School
IIT Delhi, Department/Centre/School CPSE

It is certified that:

(a) the short-listing criteria have the concurrence of the short-listing committee of the department/Centre/School

(b) further, the short-listing criteria used to arrive at the above short-listing is the institute-level short-listing criteria, **suitably enhanced with additional criteria for this particular department/Centre/School** (given below):

(Please do not retype this or attempt to change. Below, there is space to add to the criteria.)

Institute-level short-listing criteria for faculty positions:

MINIMUM SHORT-LISTING CRITERIA FOR AN ASSISTANT PROFESSOR:

- Ph.D. with 3 years experience (excluding the experience gained while pursuing Ph.D.)*,
- First class or equivalent grade in preceding degree in respective discipline, with a consistently good academic record,
- Potential for very good teaching,
- Maximum age is 35 years for male and 38years for female candidates (to be relaxed by 5 years in case of persons with physical disability, SC and ST and 3 years for OBC applicant)
- At least 4 refereed conference/journal papers (of which at least 2 should be in reputed journals).

* **Candidates with Ph.D. but with less than 3 years of experience can be considered for Assistant Professor on contract on pay as approved by the Board of Governors.**

Note: The Department/Centre/School can suitably enhance with additional criteria above the Institute level short-listing criteria for faculty positions and obtain the approval of Director for the same before processing the applications.

Additional criteria for the department (if any): Along with the general criteria of the Institute, additional criteria for CPSE dicided were as under:

i) CGPA 8/10 or 75% marks in the last qualifying examination (M.Tech., M.Sc., B.Tech.)

ii) Must have M.Tech. in Polymers/Plastic Tech./Rubber Tech., Material Science (Polymer/Plastics specialization) for candidates with science background or M.S. leading to Ph.D. with proof of undertaking 5 polymer courses.

* iii) Five (5) publications in reputed refereed journals, at least 2 (two) in the last 3 years.

Date: 17.4.2013

Signature of HoD/HoC/CoS

Dean (Faculty)

Director

CURRICULUM VITAE

Dr. Veena Choudhary

Reliance Chair Professor and Head
Centre for Polymer Science & Engg.
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Education:

PhD	Polymer Chemistry, Indian Institute of Technology, Delhi, India (1977)
Thesis Title:	Preparation and Properties of Poly [2, 2'-(alkylene-arylene)-5, 5' -bibenzimidazolyl].
M.Sc.	Organic Chemistry, Punjab University, Chandigarh, 1973 **Rank: First position in University.**
B.Sc.	Chemistry, G.N.University, Amritsar, 1971.

Recognition, Awards, Honors Received

- Humboldt Fellow, June-July 2010, University of Paderborn, Paderborn, Germany.
- Humboldt Fellow, June-July 2004 and 2005 RWTH Aachen, Germany.
- Visiting Professor, Lund University, Sweden, Sept. 2000 – Sept. 2001 (one year).
- Research Professor, Polytechnic University, New York, May 1993 - Sept. 1993.
- Indo - US Science & Technology Fellow, May 1992 - April 1993, at Polytechnic UniversityNew York, U.S.A.
- Alexander Von Humboldt Fellow, Germany, May 1985 - Sept. 1986, at Universität Karlsruhe,Germany.
- CSIR Senior Research Fellowship, 1975 – 1977.
- CSIR Junior Research Fellowship, 1973 – 1975.
- Awarded Gold Medal in M.Sc.

Professional Experience:

- Head, Centre For Polymer Science and Engg. IIT Delhi Sep.2012-Contd.
- Co-ordinator, IDP M.Tech Programme , Polymer Science and Technology Nov. 2009-todate
- Secretary Delhi chapter, The Society of Polymer Science India: 2009- Todate
- Head, Centre for Polymer Science and Engg, IIT Delhi : 2003-2006
- Co-ordinator, IDP M.Tech Prog. Polymer Sci. & Tech. : 2000-2001
- Vice President-The Society of Polymer Science India: 2004-2009
- Secretary Delhi chapter, The Society of Polymer Science India: 2001-2004
- Honorary director, DAAD : 2006-2009
- Professor, Indian Institute of Technology, Delhi,: May 1995 - Todate.
- Associate Professor, Indian Institute of Technology, Delhi,: April 1991 - April 1995.
- Assistant Professor, Indian Institute of Technology, Delhi, Sept.1986 - March 1991.
- Lecturer, Indian Institute of Technology, Delhi, March 1979 - Sept.1986.
- Research Associate, Indian Institute of Technology, Delhi, June 1977 - Feb. 1979.

Research Activities:

Significant contributions have been made in the following areas of Polymer Science:

- Synthesis and characterisation of thermally stable polymers.
- Structure - property relationship in polymers.
- Mechanistic studies on thermal and photodegradation of polymers.
- Evaluation of thermosetting matrix resins for fibre reinforced composites.
- Studies on the flammability of polymeric materials.
- Synthesis and characterisation of urethane methacrylate monomers and study of its copolymerisation behaviour with methyl methacrylate.
- Synthesis, characterisation and evaluation of methyl methacrylate copolymers using N-aryl substituted maleimides or itaconimides
- Biodegradable Hydrogels as Drug carriers
- Smart /nano hydrogels: Preparation, characterisation and its evaluation in biomedical field
- High performance sulfonated polymers: synthesis, characterisation and evaluation as fuel cell membranes
- Thermoplastic/thermosets-Nano-composites

Thirty four Ph.D. and more than seventy M. Tech. students have successfully completed their projects under my guidance. Currently tweleve students are working for their Ph. D and four for M. Tech.

Teaching Experience:

More than 34 years of teaching experience at I.I.T.Delhi. I have been associated with the teaching of polymer chemistry, polymer technology, rubber technology, high performance polymers, polymer blends and alloys and polymer characterisation courses to Pre-PhD., M.Tech, M.Sc. and undergraduate students. Laboratory facilities in the polymer chemistry, polymer characterisation, processing and testing laboratory were established under my guidance.

Publications

More than 370 papers have been published/ presented in Journals /conferences.

List of Publication [In Journals]

Year 2013

204. Parveen Saini, Govind Gupta, Manju Arora, Bipin Kumar Gupta, Veena Choudhary and Vidya Nand Singh "High Permittivity Polyaniline/Barium Titanate Nanocomposites with Excellent Electromagnetic Interference Shielding Response Nanoscale, 2013, DOI: 10.1039/c0xx00000x"

203. B.P.Singh, Prasantha, Veena Choudhary, Parveen Saini, Shailaja Pande, V. N. Singh, R. B. Mathur "Enhanced microwave shielding and mechanical properties of high loading MWCNT- epoxy composites" J Nanopart Res 15:1554 (2013)

202. Parveen Saini and Veena Choudhary "Structural details, electrical properties, and electromag-netic interference shielding response of processable copolymers of aniline" Journal of Material Science 48 (2013) 797"

201. Parveen Saini and Veena Choudhary Enhanced electromagnetic interference shielding effect-tiveness of polyaniline functionalized carbon nano-tubes filled polystyrene composites Journal of Nanoparticle Research 15 (2013) 1415

200. Parveen Saini and Veena Choudhary, "Conducting textile based multilayered shields for suppression of microwave radiations in 8.2-12.4 GHz range" Journal of Applied Polymer Science, APP-38994/2012 (2013) Accepted

Year 2012

199. Anju Gupta and Veena Choudhary "Rheologic and Mechanical Properties of Multiwalled Carbon Nanotubes Reinforced Poly(trimethylene terephthalate) Composites", Journal of Material Science,10.1007/s10853-012-7025-7 2012 .

198. Anju Gupta and Veena Choudhary, "Isothermal Crystallization Kinetics of Poly(trimethylene terephthalate)/ Multiwall Carbon Nanotubes Composites", Journal of Thermal Analysis and Calorimetry, DOI: 10.1007/s10973-013-2982-x 2012.

197. Parveen Saini, Veena Choudhary, N. Vijayan and R.K. Kotnala, "Improved Electromagnetic Interference Shielding Response of Poly (aniline)-Coated Fabrics Containing Dielectric and Magnetic Nanoparticles Journal of Physical Chemistry C, 116 (2012) 13403"

196. Parveen Saini, Veena Choudhary and S.K. Dhawan, "Improved microwave absorption and electrostatic charge dissipation efficiencies of conducting polymer grafted fabrics prepared via in situ polymerization Polymers for Advanced Technologies" 23 (2012) 323

195. Parveen Saini and Veena Choudhary "Electrostatic Charge Dissi-pation and EMI Shielding Response of Polyaniline Based Conducting Fabrics" IJPAP P-3341 (2012)

Accepted

194. *B. P. Singh, Veena Choudhary, Parveen Saini and R. B. Mathur, "Designing of epoxy compo-sites reinforced with carbon nanotubes grown carbon fiber fabric for improved EMI shielding AIP Advances", 2 (2012) 022151*

193. *R.B.Mathur, B.P.Singh, Pankaj Tiwari, Tejendra Gupta, Veena Choudhary Enhancement in the Thermomechanical Properties of Carbon Fibre - Carbon Nanotubes-Epoxy Hybrid Composites International Journal of Nanotechnology", 9, 1040-1049 (2012)*

Year 2011

192. *Parveen Saini, Veena Choudhary, B.P. Singh, R.B. Mathur and S.K. Dhawan "Enhanced microwave absorption behaviour of polyaniline-CNT/polystyrene blend in 12.4-18.0 GHz range Synthetic Metals", **161**, 1522, 2011*

191. *Gupta, A., Choudhary V. "Effect of multiwall carbon nanotubes on thermomechanical and electrical properties of poly(trimethylene terephthalate)"(2012) Journal of Applied Polymer Science, 123 (3), pp. 1548-1556.*

190. *Srivastava, P.K., Choudhary V.. N-(n-Alkyl)-2-pyridinemethanimine mediated atom transfer radical polymerization of lauryl methacrylate: Effect of length of alkyl group Journal of Applied Polymer Science, Article in Press.*

189. *Gupta, A., Choudhary V.,"Electrical conductivity and shielding effectiveness of poly(trimethylene terephthalate)/multiwalled carbon nanotube composites (2011) Journal of Materials Science, 46 (19), pp. 6416-6423.*

188. *Gupta, A., Choudhary V. "Electromagnetic interference shielding behavior of poly(trimethylene terephthalate)/multi-walled carbon nanotube composites"(2011) Composites Science and Technology, 71 (13), pp. 1563-1568.*

187. *Jones, P.J., Cook, R.D. , McWright, C.N. , Nalty, R.J. , Choudhary V., Morgan, S.E. "Polyhedral oligomeric silsesquioxane-polyphenylsulfone nanocomposites: Investigation of the melt-flow enhancement, thermal behavior, and mechanical properties"(2011) Journal of Applied Polymer Science, 121 (5), pp. 2945-2956.*

186. *Bhandari, H. , Singh, S., Choudhary V., Dhawan, S.K. "Conducting films of poly(aniline-co-1-amino- 2-naphthol-4-sulfonic acid) blended with LDPE for its application as antistatic encapsulation material"(2011) Polymers for Advanced Technologies, 22 (9), pp. 1319-1328.*

185. *Garg, P., Singh, R.P. , Choudhary V."Pervaporation separation of organic azeotrope using poly(dimethyl siloxane)/clay nanocomposite membranes"(2011) Separation and Purification Technology, 80 (3), pp. 435-444.*

184. *Saini, P. , Choudhary V., Singh, B.P. , Mathur, R.B.c, Dhawan, S.K."Enhanced microwave absorption behavior of polyaniline-CNT/polystyrene blend in 12.4-18.0 GHz range" (2011) Synthetic Metals, 161 (15-16), pp. 1522-1526.*

183. *Gupta, D., Choudhary V."Studies on novel heat treated sulfonated poly(ether ether ketone) [SPEEK]/diol membranes for fuel cell applications"(2011) International Journal of Hydrogen Energy, 36 (14), pp. 8525-8535.*

182. *Bhandari, H., Choudhary V., Dhawan, S.K."Influence of self-doped poly(aniline-co-4-amino-3-hydroxy-naphthalene-1- sulfonic acid) on corrosion inhibition behaviour of iron in acidic medium" (2011) Synthetic Metals, 161 (9-10), pp. 753-762.*

181. *Saini, P., Choudhary V., Dhawan, S.K." Improved microwave absorption and electrostatic charge dissipation efficiencies of conducting polymer grafted fabrics prepared via in situ polymerization" Polymers for Advanced Technologies, Article in Press.*

180. *Koul, V. , Mohamed, R., Kuckling, D. , Adler, H.J.P. , Choudhary V. "Interpenetrating polymer network (IPN) nanogels based on gelatin and poly(acrylic acid) by inverse miniemulsion technique: Synthesis and characterization"(2011) Colloids and Surfaces B: Biointerfaces, 83 (2), pp. 204-213.*

179. *Panwar, A. , Choudhary V., Sharma, D.K. " Review: A review: Polystyrene/clay nanocomposites" (2011) Journal of Reinforced Plastics and Composites , 30 (5), pp. 446-459.*

178. *Mohamed, R. , Choudhary V., Koul, V."Extended doxorubicin hydrochloride release from degradable gelatin-Divinyl Ester (DVE) Interpenetrating Polymer Networks (IPN)"(2011) International Journal of Pharmacy and Pharmaceutical Sciences, 3 (1), pp. 20-22.*

177. *Garg, P., Singh, R.P. , Choudhary V. "Selective polydimethylsiloxane/polyimide blended IPN pervaporation membrane for methanol/toluene azeotrope separation"(2011) Separation and Purification Technology, 76 (3), pp. 407-418.*

Year 2010

176. *Antje Britze, Josemon Jacob‡, Choudhary V. ‡, Vera Moellmann, Guido Grundmeier,Heinrich Luftmann, Dirk Kuckling "Synthesis of PPP-b-PS-block copolymers using a combination of Suzuki-Polycondensation and Nitroxide-Mediated Radical Polymerization", Polymer, 51, 5294, (2010)*

175. *Sujata Mishra, Jagbir Singh and Choudhary V., "Synthesis and characterization of butyl acrylate/ methyl methacrylate/ glycidyl methacrylate latexes" J. Appl. Polym. Sci., 115, 549, (2010)*

174. *Rashmi Chauhan, Choudhary V. "Micro structure determination of methyl methacrylate-N-aryl substituted itaconimide co-polymers by NMR spectroscopy" J. Appl. Polym. Sci., 115, 491, (2010)*

173. *P. Garg , R. P. Singh, L. K. Pandey, Choudhary V. "Pervaporative studies using polyimide filled PDMS membrane", J. Appl. Polym. Sci., 115, 1967, (2010)*

172. *Shveta Mahajan, C. K. Prashant, Veena Koul, Choudhary V. and Amit K. Dinda "Receptor specific macrophage targating by mannoseconjugated gelatin nanoparticles- an in vitro and in vivo study" Current Nanoscience, 6, 413, (2010)*

171. *Gajender Saini, Rashmi Bhardwaj, Choudhary V., A. K. Narula "Poly(vinyl chloride)–acacia bark flour composite: effect of particle size and filler content on mechanical, thermal, and morphological characteristics" J. Appl. Polym. Sci, 117, 1309, (2010)*

170. *Anju Gupta and Choudhary V. "Isothermal and non-isothermal crystallization kinetics and morphology of poly(trimethylene terephthalate)/multiwalled carbon nanotube composites" Macromol. Symp. 290, 56, (2010)*

169. *Cook, Robert D.; Jones, Paul; Nalty, Raymond; McWright, Nicole; Choudhary V.; Morgan, Sarah E. "Investigation of thermal, rheological and mechanical behavior of melt blended polyphenylsulfone/polyhedral oligomeric silsesquioxane composite systems" Polymer Preprints, 51, 591, (2010)*

168. *Pooja Chhabra, Choudhary V., "Polymer nanocomposite membranes based on sulfonated poly(ether ether ketone) and trisilanol phenyl POSS for fuel cell applications", J. Appl. Polym. Sci., 118, 3013, (2010)*

167. *Gajender Saini; A. K Narula; Veena Choudhary; Rashmi Bhardwaj, "Effect of particle size and alkali treatment of sugarcane bagasse on thermal, mechanical, and morphological properties of PVC-bagasse composites"Journal of Reinforced Plastics and Composites, 29, 731, (2010)*

166. *Kumar, Sandeep; Veena Choudhary; Kumar, Rakesh "Study on the compatibility of 102, 751, (2010)*

165. *Gopala Ram Bhadu; Sandeep Kumar; Veena Choudhary, "Rheological, melting and crystallization behaviour of an open cage POSS/PTT nanocomposite prepared by melt blending", International Journal of Plastics Technology, 14, 7, (2010)*

164. *Gupta, Anju; Veena Choudhary "Dielectric and EMI shielding behavior of PTT/MWCNT composites in microwave region", PMSE Preprints (2010)*

163. *Singh, Gursewak; Bhunia, H.; Rajor, Anita; Jana, R. N.; Veena Choudhary "Mechanical properties and morphology of polylactide, linear low-density polyethylene, and their blends", J. Appl. Polym. Sci., 118, 496, (2010)*

Year 2009

162. Parveen Saini, Veena Choudhary, K.N. Sood and S.K. Dhawan "Electromagnetic interference shielding behavior of poly-aniline/graphite composites prepared by in-situ emulsion pathway "Journal of Applied Polymer Science 2009, 113, 3146-3155

161. Parveen Saini, Veena Choudhary, B.P. Singh, R.B. Mathur and S.K. Dhawan Polyaniline-MWCNT nanocomposites for microwave absorption and EMI shielding Material Chemistry and Physics 2009, 113, 919-926

160. Parveen Saini, Veena Choudhary and S.K. Dhawan "Electrical properties and EMI shielding behavior of highly thermally stable polyaniline/ colloidal graphite composites Polymers for Advanced Technologies 2009, 20, 355-361

159. Hema Bhandari, Vineet Bansal, Veena Choudhary, and S.K. Dhawan"Influence of reaction conditions on the formation of nanotubes/nanoparticles of polyaniline in the presence of 1-amino-2-naphthol-4-sulphonic acid and its applications as electrostatic charge dissipation material" Polymer International, 58, 489, (2009)

158. Hema Bhandari, Veena Choudhary and S.K.Dhawan, "Synergistic effect of copolymers composition on the electrochemical, thermal and electrical behaviour of 5-lithiosulphoisophthalic acid doped poly(aniline-co-2-isopropylaniline) synthesis, characterization and applications", Polymers for Advanced Technologies , 20, 1024, (2009)

157. Hema Bhandari;S Sathiyanaranayan; Veena Choudhary S. K. Dhawan, "Synthesis and characterization of processible polyaniline derivatives for corrosion inhibition" J.Appl. Polym. Sci 111, 2328, (2009)

156. Saini, Parveen; Veena Choudhary; Singh, B. P.; Mathur, R. B.; Dhawan, S. K,"Polyaniline-MWCNT nanocomposites for microwave absorption and EMI shielding" Mater. Chem. Phy., 113, 919, (2009)

155. Raja Mohamed ; Veena Choudhary; Veena Koul, "Synthesis and characterization of biodegradable interpenetrating polymer networks based on gelatin and divinyl ester synthesized from poly(caprolactone diol)" J. Appl. Polym Sci., 111, 1478, (2009)

154. Pooja Chhabra and Veena Choudhary, "Synthesis and characterization of sulfonated naphthalenic polyimides based on 4, 4'diaminodiphenylether-2,2'-disulfonic acid and bis[4-(4-aminophenoxy) phenylhexafluoropropane] for fuel cell applications" Eur. Polym. J. 45,1467, (2009)

153. Praveen Saini, Veena Choudhary, K. N. Sood and S. K. Dhawan, "Electromagnetic

interference shielding behavior of polyaniline/graphite composites prepared by in-situ emulsion pathway", J. Appl. Polym. Sci., 113, 3146, (2009)

152. *Parveen Saini, Veena Choudhary and S.K. Dhawan, "Electrical properties and EMI shielding behavior of highly thermally stable polyaniline/colloidal graphite composites", Polymers for Advanced Technologies, 20, 355, (2009)*

151. *Sujata Mishra, Jagbir Singh and Veena Choudhary, "Factorial experimental design approach in semi-continuous emulsion polymerization of methyl methacrylate to study the effect of process variables" J. Appl. Polym. Sci., 113, 3742, (2009)*

150. *Hema Bhandari, Veena Choudhary and S.K. Dhawan "Synergistic effect of isopropyl group and the dopant on electrical, thermal and redox behaviour of polyaniline: synthesis characterization and applications" Electrochimica Acta 20, 1024, (2009)*

149. *Rashmi Chauhan; Veena Choudhary, "Thermal and mechanical properties of copolymers of methyl methacrylate with N-aryl itaconimides", J. Appl. Polym. Sci., 112, 1088, (2009)*

148. *Ritu Jain, A. K. Narula and Veena Choudhary "Studies on epoxy /calcium carbonate nanocomposites"J. Appl. Polym. Sci., 114, 2161, (2009)*

Year 2008

147. *Pooja Sharma, Veena Choudhary, A. K. Narula "Effect of structure of aromatic imide-amines on curing behavior and thermal stability of diglycidyl ether of bisphenol-A" J. Appl. Polym. Sci., 107, 1946, (2008)*

146. *Gajendra Saini, A. K. Narula, Veena Choudhary, "Study on PVC composites containing eugenia jambolana flour", J. Appl. Polym. Sci., 107, 2171, (2008)*

145. *P. Sharma, Veena Choudhary, A. K Narula, "Curing kinetics and thermal stability of diglycidyl ether of bisphenol: mixture of aromatic imide-amines of benzophenone 3,3', 4,4'-tetra-carboxylic acid dianhydride and 4,4'-diaminodiphenylsulfone" J. Therm. Anal. Cal., 91, 23, (2008)*

143. *Sandeep Kumar; Veena Choudhary, "Extraction and bleaching of bamboo-fiber for reinforcement in LLDPE matrix" International Journal of Plastics Technology, 12, (2008)*

142. *Roy P. K., Surekha, P., Rajagopal, C., Veena Choudhary "Degradation behavior of linear low-density polyethylene films containing proxidants under accelerated test conditions", J.*

Appl. Polym. Sci. 108, 2726, (2008)

141. *Saini, Gajender; Veena Choudhary; Bhardwaj, Rashmi; Narula, A. K. "Study on PVC composites containing eugenia jambolana wood flour" J. Appl. Polym. Sci. 107, 2171, (2008)*

140. *Sharma, Pooja; Veena Choudhary; Narula, Anudeep Kumar "Effect of structure of aromatic imide-amines on curing behavior and thermal stability of diglycidyl ether of bisphenol-A" J. Appl. Polym. Sci 107, 1946, (2008)*

139. *Dipti Singh, Dirk Kuckling, Veena Choudhary, Hans-Jüergen Adler and Veena Koul "Modification of poly(N-isopropylacrylamide films) by poly(ethylene glycol) methacrylate macromonomer for biomedical application", Eur. Polym. J. 44, 2962, (2008)*

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137. *Sharma, P.; Veena Choudhary.; Narula, A. K "Curing and thermal behaviour of epoxy resin in the presence of a mixture of imide-amines" J. Therm. Anal. Cal., 94, 805, (2008)*

136. *P. Saini, Hema Bhandari, Veena Choudhary and S.K. Dhawan, "Thermal, spectroscopic and electrical transport properties of processable poly(aniline-co-alkyl aniline) copolymers" Ind. J. Eng. Mat. Sci., 15, 505, (2008)*

135. *Rashmi Chauhan; Veena Choudhary, "Copolymerization of methyl methacrylate with N-(methoxyphenyl) itaconimides" J. Appl. Polym. Sci., 109, 987, (2008)*

134. *Nimisha Agarwal; Abhishek Singh; I.K. Varma; Veena Choudhary, "Effect of structure on mechanical properties of vinyl ester resins and their glass fiber-reinforced composites", J. Appl. Polym. Sci 108, 1942, (2008)*

Year 2007

133. *P. K Roy, P.Surekha, C.Rajagopal, Veena Choudhary,"Thermal degradation studies of LDPE containing cobalt stearate as pro-oxidant" eXPRESS Polym. Lett, 1, 208, (2007)*

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125. *Rakesh Kumar; Veena Choudhary; Saroj Mishra; I. K. Varma, "Mechanical properties of solution casted native and enzyme modified soy protein films", Biosciences, Biotechnology Research Asia 4, 531, (2007)*

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Conference papers

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1. Veena Choudhary , Artee Panwar, P.Garg, B.P.Singh, R.B.Mathur and D.K.Sharma, "Effect of commercial and synthesized multiwalled carbon nanotubes on the electrical and thermal properties of polystyrene" ACS meeting held at Denver, USA during Sept 2011

2. *Anju Gupta and Veena Choudhary* ***"****Effect of Multiwall Carbon Nanotubes on Mechanical and Rheological Properties of Poly(trimethylene terephthalate)" presented during Pittcon 2011 held at Atlanta USA during March 2011*

3. Veena Choudhary - Invited Lecture on "Alternative sources of energy-Challenges and Opportunities" during National conference on Advances in Polymer Nanocomposites during December 26-28, 2011

4. Deeksha Gupta, Veena Choudhary" Studies on effect of POSS functionality on SPEEK"NCRTPST-2011, August 26-27, 2011, Coimbatore, India (Second prize in oral presentation).

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"Effect of Multiwall Carbon Nanotubes on Electromagnetic Shielding Behavior of Poly (trimethylene terephthalate) Macro 2010, New Delhi

6. Suvam Nag Chowdhury, Deepika Malpani, T. Jai Mangal Sinha, K. K. Sashidharan, Veena Choudhary " Design and Development of Ionic Resins Based on Styrene-Maleic AnhydrideCopolymer for Printing Inks "Macro 2010, New Delhi

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8. Hema Bhandari, Veena Choudhary, S. K. Dhawan "Development of Highly Adhesive Antifouling and Anticorrosive Nanofiber Network of Conducting Copolymer –Fe_2O_3 Composite for Protection of Iron"

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*12. Anju Gupta, **Veena Choudhary**, "Dielectric and EMIi shielding behavior of PTT/MWCNT composites in microwave region", ACS, Aug 2010*

*13.Anju Gupta, **Veena Choudhary**, " Effect of multiwall carbon nanotubes on mechanical and rheological properties of poly(trimethylene terephthalate)" PITCON, 2010*

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*14. Anju Gupta and **Veena Choudhary** "Effect of multi-walled carbon nanotubes on crystallization, morphology, thermal and electrical properties of poly-(trimethylene terephthalate)"International conference Polymcon'09 at Kerala, India, 2009. (Young Researcher Award)*

*15. Anju Gupta and **Veena Choudhary** "Isothermal and nonisothermal crystallization kinetics PTT/MWCNTs composites" International conference Polychar 17 at Rouen, France, 20 -24 April 2009. (Oral presentation)*

*16. Deeksha Gupta, Pooja Chhabra, **Veena Choudhary** "Preparation and characterization of composite proton exchange membranes based on crosslinked SPEEK and inorganic fillers" International conference Polychar 17 at Rouen, France, 20 -24 April 2009. (Poster presentation)*

*17. Pooja Chhabra, **Veena Choudhary**, "Studies on sulfonated poly (ether ether ketone) –POSS nanocomposite membranes for fuel cell applications" International conference Polychar 17 at Rouen, France, 20 -24 April 2009. (Oral presentation)*

*18. Parveen Saini, **Veena Choudhary** and S. K. Dhawan, "Microwave absorption & antistatic characteristics of blends of polystyrene with polyaniline-MWCNT nanocomposites", PPS-2009 at Goa, India, 1-5 March 2009.*

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ACADEMIC QUALIFICATIONS:

Exam/Degree	Class/Marks(%)	Year	Institution/University
Ph.D.(Polymer Science)		1979	University of Calcutta
M.Tech. (Plastics Tech.)	1/74.6 (Rank 3 in the Univ.)	1974	HBTI, Kanpur University
B.Tech(Plastics & Rubber Tech)	1/74.8 (Rank 2 in the Univ.)	1971	University of Calcutta

FIELD OF SPECIALIZATION

Plastics & Rubber Technology

PROFESSIONAL EXPERIENCE

2009-2014	**IITD**	**Professor,HAG**
1995-2009	IITD	Professor
1991-95	IITD	Associate Professor

1986-91	IITD	Assistant Professor
1979-86	IITD	Lecturer

RESPONSIBILITIES

Teaching and research in the areas of plastic technology, rubber technology, polymer chemistry, testing and characterization and thermal properties of polymers and polymer blends and composites, polymer melt rheology and processing, structure-property relationships in polymer blends and alloys, particulate and fibre reinforced polymer composites.

FELLOWSHIPS/AWARDS

i) JRF(CSIR) : 1974-75
ii) SRF(UGC) : 1975-79
iii) British Council Fellowship(Colombo Plan) : March,1983-May,1983.
iv) Fellow, National Academy of Science, India(Allahabad) : 2012.
v) Member, Governing Council, CIPET Chennai, 2010-Till Date.

AFFILIATION WITH PROFESSIONAL BODIES

i) Life Member, Indian Plastics Institute
ii) Member, Plastics & Rubber Institute (1979-87)
iii) Member, Executive Committee of the Delhi Chapter of IPI (1996-1997)
iv) Member, Publication Committee, Delhi Chapter of IPI (1985-86)
v) Life Member, Indian Rubber Institute
vi) Member Editorial Board, Indian Plastics Institute , 1983-85
vii) Member, Executive Committee,IPI,Delhi Chapter,2009-10

ORGANISING/CHAIRING IN INTERNATIONAL CONFERENCES

i) Organized the Poster Session, Eighth Annual Meeting of Polymer Processing Society, New Delhi, March, 1992.
ii) Vice President, International Conf. by Asian Polymer Association, New Delhi, Dec. 17-21, 2009.

ADDITIONAL ACADEMIC/PROFESSIONAL ACTIVITIES

i) Coordinated an ISTE sponsored two-week course on "Polymeric Materials" under Quality Improvement Programme for teachers of Engineering Colleges, December, 1988.

ii) Coordinated an ISTE-sponsored Winter School of two weeks duration on "Polymeric Materials" under Quality Improvement Programme for teachers of Engineering Colleges, December, 1990.

iii) Coordinated a Short Term Course on "Advances in Compounding Technology of Rubbers" jointly with IRI Delhi, January 14-16, 1995.

INVITED LECTURES IN INDIA/ABROAD

i) Delhi College of Engineering, Delhi, 1991, one lecture on particulate filled polymer composites.

ii) RDSO, Lucknow, 1990, two lectures on preparation and testing of glass fibre reinforced plastic composites.

iii) Six lectures on plastics technology in DIPI Course.

iv) Two lectures: i) Rotomolding and Processing of rubbers, in the 4-day short term course on Polymer Processing held at IIT Delhi, Dec. 14-17, 1994.

v) One lecture: Non black fillers, in the 3-day short term course on Recent Advances on compounding technology of rubbers, held at IITD, January 14-16, 1995.

vi) Two lectures: (i) Thermal Analysis for additives, and (ii) Thermal analysis for polymer blends in 2-day short term course on Thermal Characterization of Materials, held at IITD, Feb. 18-19, 1995.

vii) MANAS, NEW DELHI, 2000, One lecture on Properties of filled plastics.

viii) MANAS, NEW DELHI, 2000, One lecture on Range of Filled Plastics.

ix) Technology Industry Meet 2001: Rubber Technology, REC Jalandhar, One Lecture on Testing on Rubber Processability.

SPONSORED RESEARCH PROJECTS

i) Co-PI in the Research Grant from the Department of Science & Technology, "Development and Analysis of Short Fibre Reinforced Thermoplastics Systems for Engineering Applications", 1987-91, Rs.20.00 lakhs.

ii) Co-PI in the Research Grant from the Department of Science and Technology, "High Density Polyethylene Tape for Woven Sacks", 1990-93, Rs.6.40 lakhs.

iii) PI in the Research Grant from Govt. of Malaysia on "Development and Analysis of Methyl and Hydroxypropyl Methyl Cellulose from Oil Palm Fibre", 1990-2000, MR.200,000/- (Rs.20 lakhs).

iv) Co-PI, Research Grant from DST, "Intelligent Processing of Advanced Polymeric Materials," March ,2006-March, 2009, Rs.130.74 lakhs.PI-Prof.A.K.Ghosh.

v) Pi, Research Grant from DST,Govt of India,"Development and Analysis of Supertough Polyamide6/Singlewall Carbonnanotube Nano Composites,' August, 2007-august 2010.Rs.21 lakhs. Co-PI-Prof.A.K.Gupta.

vi) Co-PI, Research Grant from Naval Research Board, Ministry of Defence, Govt.of India, "Design and Development of Advanced Composites Hinge Joints,"ctober,2008-October, 2011, Rs. 49.75 lakhs. PI-Prof.A.K.Ghosh.

vii) Co-PI, Research Grant from DST,Govt.of India, "Development, Characterization, and Performance Evaluation of Flyash Filled Friction Composites for Automotive Breake Lining Applications," Sept.,2010- Sept.2013, Rs. 26.96 lakhs. PI-Dr.B.K.Satapathy.

viii) C0-PI, Research Grant From Gail India Ltd. "Development and Processabilityof Polyolefins(PE and PP) for Human Healthcare Applications,"(RP02789):Rs 86 lakhs, PI-Prof. B.Gupta.

CONSULTANCY PROJECTS

1. Evaluation of rubber fuel tanks for Indian Air Force, Ghaziabad (1981-82).

2. Evaluation of ABS plastics as bobbins for M/s Modipon Ltd., Modinagar (1987).

3. Testing and analysis of Cast Nylon 6 (Garflon) for specified engineering applications for M/s Garware Synthetics Pvt. Ltd. (1988).

4. Advice on Polyether Polyol for M/s S.D. Aggarwal Business Consultant (1988).

5. Advice on surfactant properties of polyether polyol for S.D. Agarwal Business Consultant (1988).

6. Advice on the properties and classification of high impact polystyrene for M/s X-Pro India Ltd., Faridabad (1989).

7. Evaluation of composition of polystyrol for molding TV cabinets for M/s Calcom Electronics Ltd. New Delhi -52 (1989).

8. Development of polyolefin alloys for M/s Special Cable Industries (1989).

9. Evaluation of alkathene for M/s Ordance Factory, Bhandara, Ministry of Defence, Govt. of India, (1992).

10. Development and Application of coating materials for preparing knitted based tarpaulin fabrics, for M/s Nitra, Ghaziabad, (1993).

11. Development of PF/Cresol based Composites for M/s Brakewel Automotive Co. (I) P. Ltd., NOIDA, (1994).

12. Development of rubber vulcanizates, M/s R.M. Jain, Delhi, (1994).

13. Technical consultation on the production of Rubber Blowing Agent, M/s Central Excise Deptt., Govt. of India (1997).

14. Technical advise on Polymer Laminated Papers, M/s Cosmo Films Ltd. (1997).

15. Technical confirmation on the Process of Lamination for M/s Holostik India Ltd. (2000).

16. Technical Properties and Analysis of Materials, M/s Henkal Terroson (I) Ltd., (2002).

17. Analysis of Polymers used in Energiser RC 108 Rechargeable spot light, M/s Energiser (I) Ltd, (2002).

18. Evaluation and Analysis of Polymer Film Samples for specific properties, M/s Moser Baer (I) Ltd (2002).

19. Advice on Polyca rbonate sheets, M/s Directorate of Revenue Intelligence, (ROI), (2002).
20. Advice on Polyester Resin, M/s Crystic Resins (I) Pvt, Ltd., (2002).

21. Advice on Thermoplastic Resins, M/s Crystic Resins (I) Pvt Ltd., (2003).
22. Flammability of Polyethylene Based Water Tanks, M/S J.C.Gupta and Co.P.Ltd.,(2009).

TECHNOLOGIES/TECHNICAL KNOW-HOWS/PRODUCTS DEVELOPED FOR INDUSTRIAL APPLICATIONS

1. Wood flour/HDPE composites for wood substitute applications.1984.

2. Blends of polycarbonate and ABS.1985, Co-Investigator : Prof.A.Misra.

3. Calcium carbonate filled PP composites for moulding of engineering products.1985.
4. Wood flour/PP composites for furniture moulding.1986.
5. Talc filled PP composites for moulding applications.1986.
6. Glass fibre reinforced composites based on polycarbonate/polybutylene terephthalate alloys.1986, Co-Investigator : Prof.A.Misra.

7. Blends of polyvinyl chloride and ABS.1986, Co-Investigator: Prof.A. Misra.
8. Kaolin filled PP composites for high impact strength.1990.

9. Polybutylene Terephthalate/HDPE alloys with an ionomer compatibilizer,1992.Co-Investigator: Prof.A.Misra.

10. Heat conducting thermoplastic composites based on Ni filled PP.1987.

11. Heat conducting Aluminium filled PP composites.1988.

12. Conducting Silver filled PP composites.1992.
13. Supertough weather resistant PC/PDMS blends for aerospace applications.2005.
14. Supertough nylon6/ethylelene-co-bytyl acrylate blends.2006.
15. Wood/plastic composites (WPC) based on HDPE for green applications.2007.
16. Toughened PBT/ABAS copolymer blends.2007.
17. Supertough nylon6/SEBS-g-MA blends.2011.
18. Toughenening of PBT by SEBS and SEBS-g-MA copolymers.2011.
19. Development of supertough polycarbonate by SEBS and SEBS-g-MA copolymers.2013.
20. Development of PP based wood /plastic composites for eco-friendly green applications.2014.

PH.D THESIS SUPERVISED

1. Upendra K.Saroop
   Studies on Modification of Polyvinyl Chloride, 1986
   Co-Supervisor: Prof. A. Misra, IIT Delhi, Dr. K.K.Sharma, Sriram Institute for Industrial Research, New Delhi.

2. Pratap Kumar Mahapatro
   Studies on polymer composites using particulate fillers, 1988

3. Mangala Joshi
   Studies on PBT/Polyolefin Alloys and Their Short Fibre Reinforced Composites, 1992

Co-Supervisor: Prof. A. Misra

4. Krishna Ghosh
   Studies on the Properties of Silver filled Polypropylene Composites, 1992.

5. Vinita Dubey
   Studies on Elastomeric Composites for Protection against Chemical Warfare, 1997
   Co-Supervisor: Prof. A.K. Gupta, IIT Delhi, Dr. N.B.S.N.Rao, D.R.D.O. (Gwalior)

6. Y.C. Naidu
   Studies on Polymer Concrete Based on Polyvinyl Alcohol/OPC, 1999
   Co-Supervisor: Prof. A.K.Gupta, IIT Delhi, Dr.S.N.Ghosh,CRI, Ballabgarh.

7. Srinivasulu Goud
   Studies on Hot Melt Adhesives based on Styrene Containing Thermoplastic Elastomers, 2005.
   Co-Supervisor : Dr.Ashish Bhowmick, VAM ORGANICS Ltd.

8. D.Purnima
   Studies on PP based blends and composites, 2007.
   Co-supervisor: Prof. A. K. Gupta.

9. Neetu Tomar
   Studies on PBT/ABAS polymer blends and their composites,2007.

10. Smita Sangam
    Studies on PSU / HDPE blends and mica reinforced composites,2007.
    Co-supervisor: Prof.Veena Chaudhary.

11. G.P.Balamurugan
    Investigations on The Blends of Polyamide 6 and Poly(Ethylene-CO-Butyl Acrylate) and Their Nanotalc Reinforced Composites,2009.

12. K. Prakashan
    Studies on PP/PDMS Blends and their micro/nanocomposites,2009
    Co-Supervisor: Prof.A.K.Gupta

13. Kamini Sewda
    Studies on Neem Bark Flour and Teak Wood Flour Filled High Density Polyethylene Composites,2011.

14. Satpal Singh
    Studies on Rheological and Blown Film Characteristics of Poly(Lactic Acid) Based Blends and Nanocomposites,2012.
    Co-supervisor :Prof. A. K. Ghosh

15. Hemlata
Studies on the Blends of Polyamide6/SEBS-g-MA Copolymer and Their Nanotalc Reinforced Composites, 2014.
16. Rajul Sharma
Studies on Pbt/SEBS/SEBS-g-MA Blends and PBT/SEBS/SEBS-g-MA/Clay Nanocomposites, 2014.

17. Khushbu Rinawa
Studies on Polyamide12/SEBS-g-MA Blends and Composites With Organoclay and Zinc Borate Fillers.
(Thesis Submitted),2014. Co-Supervisor: Jose Marie de Cuesta, Ecole-De France.
18. Astha Garwal
Studies on Polycarbonate/SEBS-g-MA blends and composites (In Progress)
19. Mohd.Tahir Jafar
Studies on PLA/Wlllow wood flour filled Composites and their cellular forms (In Progress)
Co-supervisor: Prof.A.K.Ghosh,IIT Delhi, Prof.A.K.Mohanty,Univ. Guelf, Canada.

20. Sunil Kumar
Studies on fracture toughness, mechanical and tribological properties, and crystallization parameters of polyamide 6,66,610, and 12: a structure-property correlation approach (In Progress)
Co-supervisor: Dr.B.K.Satapathy

22. Rishi Kumar Sharma
Studies on PP/wood flour composites(In progress)
23. Santosh Kumar
Studies on Green Composites for sustainable development
Co-Supervisor : Dr.J.Jacob
24. Ranjana Nehra
Studies on PLA/PEG blends and their nanocomposites
Co-supervisor: Dr.J.Jacob
25. Rajendra Singla
Studies on biodegradable polymers
Co-supervisor: Prof.A.K.Ghosh
26. Achla
Studies on PCL/Tapioca Starch blends for biodegradable applications
Co-supervisor : Dr.J.Jacob

M.TECH. THESIS SUPERVISED

1. Studies on peroxide vulcanization of natural rubber, T.S.Raman,1982.

2. Studies on modification of PP with shellac,R.S.Haldar,1983.

3. Studies on polypropylene composites using wood flour as a filler, C.P.Chawla,1984.

4. Studies on short fibre reinforced high impact polystyrene, T.Kanakaraju, 1984,Co-supervisor: Prof.Ashok Misra.

5. Mechanical and rheological properties of polypropylene-wood flour composites,M.R.Hassan, 1984.

6. Studies on modification of high density polyethylene using wood flour as a filler, K.Singh, 1984.

7. Mechanical and rheological properties of PP/SAN blends, Vanita Agarwal,1985.

8. Studies on SAN-SBS blends and SAN/SBS/Al Composites, M.J.Parekh, 1985.Co-supervisor: Prof.Ashok Misra.

9. Studies on blends of HDPE with SAN copolymer, A.S.Kundan,1986. Co-supervisor: Prof.Avdheas Gupta.

10. Studies on HDPE-$CaCO_3$ composites, R.Jeyakumar, 1986.

11. Studies on PP/Kaolin/titanate coupling agent composites, B.H.Lopez, 1987.

12. Studies on talc filled PP composites,K.K.Sharma,1987.

13. Studies on glass fibre reinforced composites of PBT basedblends,Sudha,K.1987. Co-supervisor: Prof.Ashok Misra.

14. Development of adhesive for joining dissimilar fibre forming polymers, C.R.Jaidev,1987. Co-supervisor: Prof.A.K.Mukherjee.

15. Studies on $CaSiO_3$/titanate coupling agent/PP composites,Gurunam Singh,1988.

16. Studies on wood flour/titanate coupling agent/PP composites, R.Subbarao,1988.

17. Studies on Alumina/titanate coupling agent/PP composites, M.Raja, 1989.

18. Studies on alumina/titanate coupling agent-EVA composites, O.Singh, 1989.

19. Studies on polystyrene/wood flour composites, T.R.Srikanth,1990.

20. Organic fibrous filler/PMMA systems,B.Srinivasan,1990.

21. Studies on PC/ABS blends and PC/ABS/GF composites, N.Mythyly,1991.

22. Studies on PC/SAN and PC/SAN/PP blends, P.Rama,1991.

23. Studies on PBT/PC/GF Composites,G.Balamourougane,1992.
24. Studies on PC/PP blends and PC/PP/GF Composites, Ritu Kohli, 1992.

25. Alloys of PC/Maleated LDPE/HDPE, S.R.Tarafdar,1993.

26. Alloys of PC/Maleated LDPE/PP, S.Bhattacharya,1993.

27. Studies on organic fillers and polycarbonate modified grafted PP, T.K. Mandal, 1994.

28. Studies on methacrylic acid grafted HDPE, J.Chakraborty,1994.

29. Studies on Wood-substitute thermoplastic composites, K.Chowdhury, 1995.

30. Studies on Nylon-6 / EVA blends and their particulate filled composites, Kavita Jain,1996.

31. Studies on Nylon-6 / Ionomer blends and their talc and kaoline filled composites, Geetika Gupta,1996.

32. Studies on nylon6 / LDPE-g-MA blends and their particulate filled composites, B.K.Satapathy,1997.

33. Modification of polyethylene: an attempt to achieve biodegradability, Soma Chakraborty, 1997.
34. Studies on particulate filled composites of EPDM toughened nylon6, Smitha Sangam,1997.

35. Studies on ABS/Clorosulfonated Polyethylene blends and their mineral filled composites, N.Burman, 2000.

36. Studies on impact polypropylene based blends and composites, Dipti Kakkar, 2000.

37. Studies on blends of PP/CSM rubber and their mineral filled composites, R.Das,2000.

38. Studies on kaolin filled medium impact PP composites,V.Hearle, 2001.

39. Studies on impact PP/$CaCO_3$ composites, Alips Srivastava, 2001.

40. Studies on talc filled composites of impact polypropylene, Kavita Abrol, 2001.

41. Influence of abrasives on the performance of non-abrasive brake materials, V.Mittal,2001.

42. Studies on PBT / TiO_2 nanocomposites, R.Misra, 2002.

43. Studies on PP/micro and nano TiO_2 composites, Mukta Kashyap,2002.

44. Synthesis and characterization of fluorinated nanoparticles by min-Emulsion polymerization,Samali Dutta,2003.Co-supervisors: Prof.J.P. Adler &Prof.I.K.Varma.

45. Controlled ring-opening polymerization of L-lactide with new less toxic Initiators, Reema, 2003. Co-supervisors: Prof.Ann-Christine Albertsson, Prof.I.K.Varma.

46. Studies on EVA/clay nanocomposites, N.Jain,2004.Co-supervisor: Prof.A. K.Ghosh.

47. Toughening of phenolic resin using hydroxyl terminated polybutadiene, Nirmal,C.2004. Co-supervisor: Dr.R.M.V.G.K.Rao.

48. Studies on effect of EVA and MaA grafted PP compatibilizers on the properties of PC/ABS blends, G.Krishna Prasad,2004.

49. Studies on PC/PDMS blends and composites, S.Kumar,2004.
50. Studies on ABS/acrylate rubber blends and their mica filled composites, N.Chauhan,2005.
51. Studies on nylon6/EPDM-g-MA blends and their mica filled composites, B.V.Ramanaiah,2005.
52. Studies on Bamboo/GF reinforced USP and VE resin composites,

S.Mandal,2005.Co-supervisor: Prof.I.K.Varma.

53. Studies on SAN/acrylate rubber blends and their mica filled composites, V.K.Soni,2005.
54. Studies on PBT/ABS blends and their talc filled composites, S.Prasad, 2005.Co-supervisor: Prof.A.K.Ghosh.
55. Studies on nylon6/PDMS blends and nylon6/PDMS/$CaCO_3$ composites, T.Rajasekaran,2006.
56. Studies on SAN/CPE blends and their composites with mica and nano $CaCO_3$, D.R.Mandavia,2006.Co-supervisor: Prof.A.K.Gupta.
57. Studies on PC/PDMS and PC/PBT/PDMS blends, R.Govardhan, 2006.
58. Studies on PBT/PDMS blends and their micro and nanocomposites, Pravin,R.2006.
59. Studies on reinforcement of carbon black and Nanofiller in CPE/CSM blend, S.Mandal,2006. Co-supervisors: Prof.A.K.Gupta,Dr.S.N. Chakraborty.
60. Studies on PC/ASA and PC/modified ASA terpolymer blends, A.A. Ramteke, 2007.
61. Studies on PBT/ASA and PBT/ASA-g-MA blends, K.C.Mandal,2007.
62. Studies on PBT/nylon6/EPDM-g-MA blends,D.D.Bambole,2007.
63. Studies on PP/$CaCO_3$ nanocomposites, Rashmi Agarwal, 2007.
64. Studies on PP/ASA blends, S.Varsney,2007.
65. Studies on SAN /ASA blends and SAN/ASA/nanoclay composites,Rajul Sharma, 2008.
66. Studies on nylon12/PP,nylon6/PP blends,and the effect of compatibilizers on nylon12/PP blends, Surabhi Jain, 2008. Co-supervisor : K.Ramya.
67. Studies on PP/Nanoclay Blends Compatibilized With EPDM-g-MAH, Priya Dwivedi,2009.
68. Studies on Poly(Butylene Terephthalate) Nanocomposites,Deeplata Singh, 2009.
69. Studies on Polyamide 6/EPDM-g-MA/Clay Ternary Nanocomposites, Sunil Kumar,2009.
70. Studies on Polycarbonate/EPDM-g-MAH Blends And Their Clay Filled Nanocomposites, Sunita Sanwaria,2009.
71. Studies on Trogamid/SEBS-g-MAH Blends and Their Nanoclay Reinforced Composites,Priya Sonkar,2010.
72. Studies on Trogamid/EPDM-gMAH blends and Their Nanoclay Reinforced Composites,Astha Garhwal, 2010.
73. Studies on PP/Nylon6/EPDM-g-MAH Blends and Nanoclay filled Composites,Abha Misra,2010.
    Co-supervisor: Prof.A.K.Gupta
74. Studies on nylon6/ASA/SEBS-g-MA Blends and Their Nanocomposites With Clay, Soumadeep Chaudhury, 2010.
75. Studies on nylon6/PVOH blends and PBT/calcium silicate composites Sananda Nag,2011.
76. Studies on PBT/PC blends and their toughening by SEBS-g-MA Shalini Singh,2011.

77. Studies on PLA/SEBS-g-MA blends and their teak wood flour filled Composites.Abhilasha Kanwar,2011.
78. Studies on LDPE/PVOH blends and their compatibilization by LDPE-g-MA.Rajendra Singla, 2011.
79. Studies on nylon6/PP-g-MA blends.
    Ragini,2011.
    Co-supervisor: Prof.A.K.Gupta
80. Stidies on nylon 66/SEBS-g-Ma blends and their nanocomposites, Saranya,2011-12..
81. Studies on PS/SBS blends and their composites.
    S.S.Chauhan,2011-12..
82. Studies on SAN/SEBS-g-Ma blends and their composites.
    Ravi, 2011-12.
83. Studies on PP/Sal wood flour composites.
    Saleheen Bano, 2012-13.
84. Studies on PP/Teak wood flour composites.
    Parul Sachadeva, 2012-13.
85. Studies on PLA/Teak wood flour composites.
    Sneha Dardmare, 2012-13.
86. Studies on HDPE/Starch biodegradable composites.
    Kishore Biswas, 2012-13.
87. Studies on HDPE/Soy flour composites.
    Anubha Gupta, 2012-13.
88. Studies on Polycarbonate and Poly(Ethylene-co-Butyl Acrylate-co-Glycidyl Methacrylate) Blends.
    Surendra Kumar Pandey, 2013-14.
89. Studies on Poly(Butelene Terephthalate)/Poly(Ethylene-co-Butyl Acrylate) Blends.
    Vishal Srivastava, 2013-14.
90. Studies on Poly(Lactic Acid)/Poly(Ethylene-co-Butylacrylate-co-Glycidyl Methacrylate) Woodflour Composites.
    Pius C.V., 2013-14.

B.TECH. THESES SUPERVISED

1. Studies on molecular weight distribution in vinyl polymers, 1980.

2. Rice Husk Ash-Production, Characterization and utilization as polymer (Polypropylene) Filler, 1988.

3. Studies on blends of PP an HDPE, 1991.

4. Development of low halogen flame retardant and smoke suppressant thermoplastic composition for cables, 1991.

5. Studies on wood substitute composites for food transport, 1999 (Lee Choong Wei).

6. Studies on wood flour reinforced polypropylene composites for bulk packaging of foods, 1999 (Tech Eng Huat).

7. Studies on wood fiber/HIPS composites for bulk transport of foods, 1999 (Ng Kee Chee).

8. Studies on HDPE/WF systems for food transport, 1999 (Foo Siang Mond).

9. Studies on the rheological properties of carboxymethyl cellulose, 1999 (Voon Ken Hooi).

10. Studies on HIPS/SBS/WF composites for bulk food packaging, 2000 (Dyang Rubiee bt. Awang).

11. Studies on PS/SBS composites for bulk food packaging, 2000 (Md. Yusaf Hasan).

12. Studies on PP/EPDM/Talc composites for bulk food packaging, 2000 (Lau Sear San).
13. Studies on HIPS/SBS/Talc composites for bulk transport of foods, 2000 (Ng Kang wei).

14. Studies on HDPE/SBS/Talc composites for bulk packaging of foods, 2000 (Tan Chin Tee).

15. Studies on ABS/SBS/Talc composites for bulk food packaging, 2000 (Siew Pei Fung).

ADMINISTRATIVE RESPONSIBILITIES AT IIT DELHI

1. Coordinator, M.Tech. Programme in Polymer Science and Technology, 1984-90.

2. Member, Research Committee of Centre for Materials Science and Technology, 1984-90, 1990-98, 2000-till date.

3. Member, Library Advisory Committee, 1979-84.

4. Incharge of Seminar, Centre for Materials Science & Technology, 1983-84, 2000-2001.

5. Incharge, CMST Stores, 1990-91.

6. Security Officer, CMST, 1992-94.

7. Incharge, Polymer Testing Laboratory, CMS, 1995.

8. Incharge, PRO matters, CMST, 1992-1995.

9. Secretary, Faculty Board, CPSE 1994-95.

10. Convenor, CRC, CPSE 1994-96.

11. CPSE Representative to BPGS, 1994-96.

12. Member, Senate, IIT Delhi, 1995 – 2014(June30).

13. Head, Centre for Polymer Science and Engineering 2000-2003, 2019-12.

14. Member, Executive Committee of Senate,2000-2003, 2019-12.

15. Chairman, CRC, CPSE, Spet.2000 –August 2003, Sept.2009-Aug.2012.

19. Member, Board of Governors, IIT Delhi, Jan 2012-Dec.31,2014.

EXAMINATION OF DOCTORAL THESIS OF OTHER UNIVERSITIES/INSTITUTES

1. Studies on Chemical Modification of Cellulose and Starch.
   University of Calcutta (1989).

2. Investigation on vinyl-nitrocellulose and vinyl-butylated melamine-formaldehyde resin blends, University of Calcutta, (1992).

3. Studies on the Curing of Polyacrylic Rubber in the Presence of Metal Oxides.
   IIT Kharagpur (1994).

4. Studies on Vinyl Polymerization, University of Calcutta, 1997.

5. Grafting of natural and related fibres by vinyl monomers and their characterization, University of Calcutta, 2000.

6. Specialty polyblend systems of polyurethane elastomer (S-cure) with reference to blending technique and interchain crosslinking, IIT Kharagpur (2000).

7. Modification of Polyethylenes by Reactive Extrusion, Cochin University of Sci. & Tech., 2001.

8. Studies on Thermoplastic Elastomers Based on polyethylene/ Elastomer Blends, Cochin University of Sci. & Tech., 2002.

9. Studies on Synthetic Polymeric Membranes, University of Calcutta, 2002.

10. Synthesis and Characterization of Thermoplastic Ionomers Based on Natural Rubber, Cochin University of Science and Technology, 2002.

11. Effect of Rubber Valcanizate Powders on the properties of silicone rubber, fluoro rubber and their blends. IIT, Kharapur, 2003.

12. Novel Binary and Ternary Blends from Fluorocarbon Rubber, Acrylic Rubber and Acrylate Plastics. IIT Kharagpur, 2003.

13. Studies on Blends of Low Density Polyethylene and Poly Dimethyl Siloxane Rubber. IIT, Kharagpur, 2003.

14. Flocculation and Rheological Investigations in Aqueous Solutions of hydrolysed and Unhydrolyzed Grafted polysaccharides. IIT, Kharagpur, 2003.
15. Development of integral setup for the measurement of thermal Conductivity and thermal expansion and thermal diffusivity of fiber Reinforced plastics and its studies at cryogenic temperatures. IIT Kharagpur,2004.
16. Self-reinforced composites based on liqid crystalline polymer And thermomoplastic polymers.IIT Kharagpur,2003.
17. Novel low cost bamboo-polymer composites.Calcutta University,2008.
18. Preparatipn,properties,processing and application of polyaniline and Its composites.IIT Kharagpur,2008.
19. Advanced Thermoplastic Composites : A Critical Evaluation of Mechanical, Thermal, Morphology and Rheological Performance, Utkal University,2009.DSC Thesis.
20. Development of Mesua Ferrea L.Seed Oil Based Polyurethane Resins, Tezpur University,2009.
21. Phisico-Chemical Studies of Biopolymer Composites Derived From Agricultural And Industrial Biomass., Utkal University, Odisha,2009.
22. Structure-property relationship studies on carbonnanotube based Polypropylene composites, IIT Bombay, 2010.
23 Fiber –Reinforced Polymer Nanocomposites: A Critical Analysis of Fiber Matrox Interface, Dynamic Mechanical & Thermal Behavior and Weathering Resistance, Utkal University, Odisha.

24. Development and Characterization of Poly(Urethane-Amide) ProtectiveCoating Materials From Renewable Resource, Jamia Millia Islamia, 2012.
25. Studies on the Effect of Different Additives on the Thermo Reversible gel of Methyl Cellulose, University of Calcutta, 2012.
26. Development, Characterization and Wear Behaviour Analysis of Particulate Filled Short Fiber Reinforced Polymer Composite, NIT, Hamirpur,2013.
27. Effect of Clay Exfoliation & Organic Modification on Morphological, Thermal, Mechanical, and Viscoelastic Behaviour of Nanocomposites: A Critical Study on Biodegradability, D.Sc. Thesis, Utkal University, 2013.
28. Eco-Friendly Composites of Banana and Hardwood Fiber Reinforced Modified Polypropylene, IIT Roorkee,2014.
29. Development of Waterborne Alkyds and Their Derivatives, Jamia Millia Islamia, 2014.
30. Development of Polymeric Nanocomposites For Microwave Absorbing Applications, IIT Kharagpur, 2014.

REFEREEING OF RESEARCH PAPERS/ARTICLES FOR PUBLICATION

1. Indian Journal of Physics (1990).
2. Polymer Composites (1991).
3. Journal of Applied Polymer Science (1992, 2003-tilldate)
4. Journal of Polymer Materials (1992).
5. Polymer Engineering and Science (1993-till date)
6. Polymer Bulletin,(2008-till date)
7. Journal of Polymer Research
8. Journal of Materials Chemistry and Physics

OTHER ACTIVITIES

1. Refereed three research proposals of CSIR and one for DSIR-UP Govt. for their suitability for research grants, 1988, 1991, 2001.

2. Acted as an expert for National Research Development Corporation for the assessment of a proposal regarding rubber latex centrifuging machine (1991), and Cable Joints (2003).

3. Acted as an expert for a committee Govt. of India, Ministry of Science and Technology, Department of Scientific and Industrial Research for recognition of in-house R & D unit of M/s Flex Industries Ltd., Noida (1992).

4. Acted as an expert for selection Research Associates and Senior Research Assistance for Defence Research and Development Organization, Govt. of India, New Delhi, (1992, 2000-till date)6

5. Acted as an evaluator for a research proposal on acrylics as artificial lens, Ministry of Sci. & Tech., DSIR, Govt. of India, 2003.
6. Member,Technology Development Board,for financial grant to M/S Josh Polymers,Kolkata, 2008-till date.

ANNEXURE – I

LIST OF PUBLICATIONS

A. Papers Published in Refereed Journals

1. Ghosh P, Maiti S N, (1978), "Polymerization of methyl methacrylate with the use of cetyltrimethyl ammonium bromide –benzoyl peroxide combination as the initiating system," European Polymer Journal,14,855-859.

2. Ghosh P, Maiti S N, (1979),"Polymerization of methyl methacrylate with cetyl pyridinium bromide-benzoyl peroxide combination as a redox initiator and cetyl pyridinium bromide as a lone photo initiator," European Polymer Journal,15,787-795.

3. Ghosh P, Maiti S N,(1980), "Polymerization of methyl methacrylate with cetyl benzyl dimethyl ammonium chloride-benzoyl peroxide as redox initiator system,"European Polymer Journal,16,1115-1119.

4. Maiti S N, Singh K,(1986), "Influence of Wood flour on the mechanical Properties of polyethylene," Journal of Applied Polymer Science, 32,4285-4289.

5. Maiti S N, Chawla C P, (1987), "Effect of wood flour on the mechanical properties of wood flour filled polypropylene compotes,"Journal of Polymer Materials, 4, 155-163.

6. Maiti S N, Mahapatro P K, (1988), "Melt rheological properties of nickel powder filled polypropylene composites,"Polymer Composites, 9, 291-296.

7. Saroop U K, Jain K K, Saroop M, Sharma K K, Misra A, Maiti S N, (1988),"Grafting of poly (vinyl chloride) with methyl methacrylate – Part I : Synthesis and characterization,"European Polymer Journal, 24, 689-691.

8. Saroop U K, Jain K K, Sharma K K,Misra A, Maiti S N, (1988), "Grafting of poly (vinyl chloride) with methyl methacrylate – Part II: Thermal and mechanical behaviour," European Polymer Journal, 24, 693-696.

9. Maiti S N, Mahapatro P K, (1988), "Melt rheological properties of aluminium powder filled polypropylene composites,"Journal of Polymer Materials, 5, 179-183.

10. Maiti S N, Mahapatro P K, (1989), "Crystallization of PP in PP/Ni composites and its correlation with tensile properties," Journal of Applied Polymer Science, 37, 1889-1899.

11. Maiti S N, Hassan M R, (1989), "Melt rheological properties of polypropylene-wood flour composites,"Journal of Applied Polymer Science, 37, 2019-2032.

12. Maiti S N,Mahapatro P K, (1989), "Crystallization of polypropylene and its correlation with tensile properties in AI powder filled composites," Journal of Polymer Materials, 6, 107-114.

13. Saroop U K, Sharma K K, Jain K K, Misra A, Maiti S N, (1989), "Studies on poly blends of PVC with various acrylate copolymers – Part I: Physical and Mechanical properties," Journal of Applied Polymer Science, 38, 1401-1419.

14. Saroop U K, Sharma K K, Jain K K, Misra A, Maiti S N, (1989), "Studies on polyblends of PVC with various acrylate copolymers Part II: Melt rheological properties,"Journal of Applied Polymer Science, 38, 1421-1437.

15. Maiti S N, Mahapatro P K, (1989),"Thermal properties of A1 powder filled polypropylene composites,"Journal of Polymer Materials, 6, 181-186.

16. Gupta A K, Jain A K, Maiti S N, (1989), "Studies on binary and ternary blends of polypropylene with ABS and LDPE I: Melt rheological behaviour,'Journal of Applied Polymer Science, 38, 1699-1717.

17. Maiti S N, Misra A, Parekh M J, (1989), "Mechanical and melt rheological properties of styrene-co-acrylonitrile and styrene-butadiene-styrene block copolymer blends," Indian Journal of Technology, 27, 001-003.

18. Maiti S N, Jeyakumar R,(1990), "Mechanical and rheological properties of HDPE/$CaCO_3$ composites," Journal of Polymer Materials, 7, 29-34.

19. Gupta A K, Jain A K, Ratnam B K, Maiti S N, (1990), "Studies on binary and ternary blends of polypropylene with ABS and LDPE II: Impact and tensile properties," Journal of Applied Polymer Science, 39, 515-530.

20. Maiti S N, Mahapatro P K,(1990), "Thermal properties of nickel powder filled polypropylene composites," Polymer Composites, 11, 223-228.

21. Maiti S N, Mahapatro P K, (1990), "Crystallization of i-PP/$CaCO_3$ composites and its correlation with tensile properties," International Journal of Polymeric Materials, 14, 205-222.

22. Maiti S N, Subbarao R, (1991), "Mechanical properties of isotatic polypropylene/wood flour composite,"International Journal of Polymeric Materials, 15, 001-016.

23. Maiti S N, Mahapatro P K, (1991), "Mechanical properties of i-PP/$CaCO_3$ composites," Journal of Applied Polymer Science, 42, 3101-3110.

24. Maiti S N, Mahapatro P K, (1991), "Mechanical properties of i-PP/Al composites," Polymer Plastics Technology and Engineering, 30 (5 & 6), 559-574.

25. Maiti S N, Aggarwal V, Gupta A K, (1991), "Melt rheological properties of PP/SAN blends,' Journal of Applied Polymer Science, 42, 1891-1900.

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35. Naidu Y C, Gupta A K, Maiti S N, Ghosh S N, (1995), "Effect of water/cement ratio and polymer content on compressive strength of OPC-PVA composite" Il Cemento, 92, 22-28.

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57. Sewda,Kamini,Maiti S N, (2007), "Mechanical properties of HDPE/Bark flour composites," Journal of Applied Polymer Science,105,2598-2604.

58. Prakashan K, Gupta A K, Maiti S N, (2007), " Effect of compatibilizer on micromechanical deformations and morphology of dispersion in PP/PDMS blend," Journal of Applied Polymer Science, 105,2858-2867.

59. Kumar S, Maiti S N, (2007), "Studies on polycarbonate and polydimethylsiloxane rubber blends," Polymer Plastics Technology and Engineering,46(4),427-433.

60. Balamurugan G P, Maiti S N, (2007), "Influence of microstructure and deformation behavior on impact toughening of reactively compatibilized polyamide6 and ethylene-co-butylacrylate blends," European Polymer Journal,43,1786-1805.

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64. Tomar Neetu, Maiti S N, (2008), "Morphology and mechanical properties of PBT/fluoroelastomer blends," Journal of Polymer Research,15(1),37-45.

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66. Balamurugan G P, Maiti S N, (2008), "The influence of reactive compatibilization on uniaxial large strain deformation and fracture behaviour of polyamide-6/poly(ethylene-co-butyl acrylate) blends," Polymer Testing,27,752-764.

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68. Balamurugan G P, Maiti S N, (2008), " Interfacial Slip-stick Transition Induced by Reactive Compatibilization of Ethylene-co-butyl Acrylate Elastomer Dispersed Polyamide6 Blend Subjected to High Shear Flow and Extensional Flow," Polymer Engineering and Science, 48(12), 2482-2498.

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73. Sewda Kamini, Maiti S N,(2010),"Crystallization and Melting Behavior of HDPE in HDPE/Teak Wood Flour Composites and Their Correlation With Mechanical Properties," Journal of Applied Polymer Science, 118, 2264-2275.

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76. Ramteke A A, Maiti S N,(2010), "Mechanical Properties of Polycarbonate/Modified Acrylonitrile-Styrene-Acrylate Terpolymer Blend," Journal of Applied Polymer Science, 116(1), 486-492.

77. Mandal Subhash, Alam S, Varma I K, Maiti S N, (2010), "Studies on Bamboo/Glass fiber reinforced USP and VE resin," Journal of Reinforced Plastics and Composites, 29(1),43-51.

78. Tomar Neetu, Maiti S N,(2010), "Melt Rheological Properties of PBT/ABAS/Mica Composites," Polymer Plastics Technology and Engineering, 49, 617-623.

79. Singh Satpal, Ghosh A K, Maiti S N,Gupta Rahul, Bhattachrya S N(2010), " Poly(L- lactic acid)/layered silicate nanocomposite blown film for packaging application: Thermal, mechanical, and barrier properties," Journal of Polymer Engineering, 30(5-7), 361-375.

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83. Kakkar Dipti, Maiti S N, (2012), "Effect of flexibility of ethylene vinyl acetate copolymer and crystallinity of isotactic polypropylene on the mechanical properties of EVA/I-PP blends," Journal of Applied Polymer Science, 123, 1905-1912.
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85. Hemlata, Maiti S N, (2012), "Nonisothermal crystallization kinetics of PA6/SEBS-g-MA polymer blends," Journal of Polymer Research, 19:9926- 1-16.
86. Sharma Rajul, Maiti SN, (2013), "Modification of Tensile and Impact Properties of Poly(butylene terephthalate)(PBT) by Incorporation of Styrene-Ethylene-Butylene-Styrene(SEBS) and Styrene-Butylene-Styrene-g-Maleic Anhydride(SEBS-g-MA) Terpolymer," Polymer Engineering and Science,1-12.
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94. Astha Garwal, S.N.Maiti,(2013), "Influence of styrene-ethylene-butylene-styrene (SEBS) copolymer on the tensile and impact properties

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96. Khushboo Rnawa, Maiti S N, Lopez-Cuesta Jose Marie, (2013), " Melt rheological properties of PA12/SEBS-g-MA copolymer blends in the linear viscoelastic region," Polymer Bulletin, (Communicated for Publication).
97. Sharma Rishi, Maiti S N, (2013), "Effects of SEBS-g-MA Copolymer on Nonisothermal Crystallization Kinetics of PP," Journal of Thermal Analysis and Calorimetry, (Communicated for Publication).
98. S.Kumar, B.K.Satapathy, S.N.Maiti (2014), "Toughening polyamide612 By controlling dispersed phase domain size : Essential Fracture Assessment," Materials and Design,(Under Review).
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100. J M Augustine, Maiti S N, Gupta A K,(2011), "Effect of SWNT on crystallization of PA6 in its blend with EPDM-g-MA," Journal of Applied Polymer Science, (Communicated).
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2. Maiti S N, (1998), "Additives," In Polymeric Materials Encyclopedia, Synthesis, Properties, and Applications, J C Salamone(Ed),CRC, Florida,USA, P1-5.

List of Research Papers Presented in Conferences

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   A. Misra, S.N. Maiti and T.Kanakraju.

Proceedings of Indian Chemical Engineering Congress, Hyderabad, p.122, Dec. 1986.

2. Short Glass Fibre Reinforced Composites of Polybutylene Terephthalate Based Blends.
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3. Studies on PBT/Polybutylene Alloys.
M.Joshi, S.N. Maiti an A. Misra,
IUPAC-MACRO, Montreal, Canada, July, 1990.

4. Studies on Polybutylene Terephthalate/Polyolefin Alloys.
M.Joshi, S.N. Maiti an A. Misra,
Polymer 91 – held at NCL, Pune, January, 1991.

5. Dynamic Mechanical Behaviour of Polypropylene Filled with Particulate Silver Powder.
K.Ghosh and S.N. Maiti,
Proceedings of the 8th National Symposium or Thermal Analysis, Indian Thermal Analysis Society, Dec. 19-21, 315-321, 1991.

6. Effect of Glass Fibres on the Dynamic Mechanical and Thermal Properties of Composites Based on PBT/Polyolefin blends.
M.Joshi, S.N. Maiti and A. Misra,
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7. Polymers for protection against hazardous chemicals of Defence Interest.
V.Dubey, N.B.S.N. Rao, S.N. Maiti and A.K. Gupta,
Proceedings of the National seminar on Polymers, Dec. 22-23, 1995, IPI and Punjab University, Chandigarh.

8. Carbon Loaded Butyl Rubber Membranes for protection against Vescicants,V. Dubey, N.V.S.N. Rao, S.N. Maiti and A.K. Gupta,
Proceedings of the National conference in Recent Trends in Carbon. Dec. 19-20, 1996, O.P. Bahl (Ed), Organised by Indian Carbon Soc. New Delhi and DMSRDE, Kanpur.

9. Effect of alumina on the mechanical properties of i-PP/alumina Composites,S.N. Maiti, Mohd. Nordin Ibrahim and M. Raja,
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10. Melt rheological properties of wood fibre/i-PP composites.
S.N. Maiti, Mohd. Nordin Ibrahim and R. Subbarao,
WEC-99, July 19-22, Kuala Lumpur, Malaysia.

11. Nylon/Eva blends: Studies on the mechanical, thermal and morphological properties.
A.R. Bhattacharya, A. Misra, S.N. Maiti and M.D. Chakraborti,
Proc. Polymer 99 International Symposium on Polymers beyond AD2000, New Delhi (Jan 1999), 388.
12. S.Mandal,I.K.Varma,S.N.Maiti, "Studies on bamboo/glass fiber reinforced USP resin," Proc Intern Conf on "Advances in Polymer Blends, Composites,IPNs, and Gels: Macro to Nano Scales," Kottayam(2005),P.115.
13. B.George,S.N.Maiti,I.K.Varma, "Impact Modification of San Using NR/PMMA Core-Shell Particles,"Proc Intern Conf on "Advances in Polymer Blends,Composites,IPNS and Gels: Macro to Nano Scales," Kottayam(2005)P169.
14. D.Purnima, S.N.Maiti, A.K.Gupta, "Mechanical Properties of Talc Filled Polypropylene: Effect of PP-g-MAH as Coupling Agent," Proc Intern Conf on " Advances on Polymer Blends,Composites,IPNS, and Gels: Macro to Nano Scales,"Kottayam(2005),P173.
15. Neetu Tomar,S.N.Maiti, " Determination of Optimum Compatibilizer Concentration For PBT/Acrylonitrile-Butylacrylate-Styrene Blends by Using Tensile Strength Data," Proc Intern Conf on " Advances in Polymer Blends,Composites,IPNS, and Gels: Macro to Nano Scales,"Kottayam(2005),P 178.
16. K.Prakashan,S.N.Maiti,A.K.Gupta, "Binary Blends of Polypropylene and Poly(Dimethylsiloxane) Elastomer: Mechanical Properties and Morphology," Proc Intern Conf on " Advances in Polymer Blends, Composites,IPNS, and Gels:Macro to Nano Scales," Kottayam(2005),P.178.
17. V.Chaudhary,S.Sangam,S.N.Maiti, "Morphology and Mechanical Properties of PSU/HDPE Blends," Proc intern Conf on "Advances in Polymer Blends,Composites,IPNS, and Gels:Macro to Nano Scales," Kottayam(2005),P.181.
18. Neetu Tomar,S.N.Maiti,"Morphology and Mechanical Properties of PBT/ABAS/Nano TiO_2 Nanocomposites," Intern Conf on "Nanoscience and Technology," ICONSAT, March 16-18,2006,New Delhi.
19. G.P.Balamurugan,S.N.Maiti, " Morphological Properties of PA 6/EBA Blends," 9 th. National Conf of Soc for Polym Sci India-Macro 2006:Polymers for Advanced Technologies,Dec 17-20,2006,NCL Pune,India.
20. Kamini Sweda,S.N.Maiti, "Studies on HDPE/Neem Bark Flour Bio-Composites," 9^{th}. Intern Conf on "Wood & Biofiber/Plastics Composites," Madison,Wisconsin,Monona Trrace Community and Convention Center,USA,May 21-23,2007.
21. S.N.Maiti,Neetu Tomar, "Evaluation of Phase Interaction in Polymer Blends And Composites by Simple Modified Models," in "Poly 2008:

Advances in Polymer Science and Technology," Jan 28-31,2008,New Delhi,India.

22. S.N.Maiti,Kamini Sweada, "Mechanical and Dynamic Mechanical Properties of Teak Wood Flour Reinforced HDPE Composites," in "Indo-French Collaboration Seminar," September 23-26,2008,IIT,New Delhi,India.
23. Singh S, Ghosh A K, Maiti S N, (2008), "Development of poly (L-lactic acid, PLLA) nanocomposite blown films" International Seminar: Asian Polymer Association-2008, New Delhi, India,
24. Singh S, Ghosh A K, Maiti S N, (2009), "Morphology and thermal characterization of poly(L-lactic acid) nanocomposite blown film," Macro-2009: Recent Advances in Polymeric Materials, Chennai, India.
25. Maiti S N, Sweda Kamini, "Wood-Plastic Composites : Teak Wood Flour and Neem Bark Flour/HDPE Composites," Proc.25 th Annual Meet of Polymer Processing Soc,International Conf.,Goa,India,March1-5(2009),P-30.
26. Singh S, Ghosh A K, Maiti S N, (2009), "Biodegradable polymeric film from polylactide /clay nanocomposites," Asian Polymer Association-2009,December, New Delhi, India.
27. Deeplata Singh, Maiti S N, "Toughening of PBT With Functionalised EPDM Copolymer," Proc. 25th Annual Meet of Polymer Processing Soc.,International Conf.,Goa,India,March 1-5,(2009),P-26.
28. Singh S, Ghosh A K, Maiti S.N <(2009), "Poly (L-lactic acid)/layered silicate nanocomposite blown film: Morphological, viscoelastic and thermal properties," Polymer Processing Society 25 th Annual Meeting, PPS-25, GS-V,OP 10, March, Goa, India.
29. J.M.Agustine, S.N.Maiti, A.K.Gupta, "Crystallization kinetics of nylon6 in Supertough nylon6/SWNT nanocomposites," Proc.APA Conf.,New Delhi,Dec.17-20,2009.
30. Singh S, Ghosh A K, Maiti S N, (2010), "Biodegradable polymeric film based on poly(lactic acid) /LLDPE blends," Macro 2010-Frontiers of Polymers and Advanced Materials, December, New Delhi, India.
32. A.Garhwal, S.N.Maiti, "Studis on supertough Trogamid/EPDM-g-MA blends,"Proc.Advancements in Polymeric Materials-2010 International Conf., CIPET, Bhubaneswar,Feb.19-22,2010.
33. A.Misra,S.N.Maiti, A.K.Gupta, "Studies on PP/supertough nylon6 blends," Proc. APM_2010 Int.Conf., CIPET, Bhubaneswar, Feb. 19-22, 2010.
34. S.N.Maiti, P.K.Mahapatro, K.Ghosh, "Particulate Filled Polypropylene-Some Aspects of Structure-Properties," Proc. APM-2010 Int.Conf., CIPET,Bhubaneswar,Feb.19-22,2010.
35. S.N.Maiti, J. M. Agustine, "Polymer Nanocomposites- An Over View,"National Coference on Frontiers in Polymer Nanomaterials and Composites,March18-19,2010,B.S.Abdur Rahman University,Chennai.
36. Hemlata, Maiti S N, "Studies on PA6/SEBS-g-MA copolymer blends,"

Proc. APA Coference, November 27-30,2010,November, Thapar University,Patiala,Punjab.

37. Singh S, Ghosh A K, Maiti S N, Gupta r, Bhattacharya S N,(2010) "Rheological and morphological studies of polylactide/clay nanocomposite blown films," Polymer Processing Society 26th Annual Meeting, PPS-26, G05-188, July, Banff, Canada.

38. S.NMaiti, K Rinawa, J M Lopez Cuesta, R Sonnier, "Rheological and mechanical properties of rubber toughened polyamide12/organoclay nanocomposites," Invited lecture in the International Conference-APM-2011, March 25-27,2011, CIPET, Chennai.

39. J M Agustine, S N Maiti, A K Gupta, "Effect of carbon nanotubes on Crystallization of Polyamide-6," Nanotech Insight Conference(NIT-2011), Cairo, Egypt, Feb 27-Mar2,2011.(Paper was accepted, but the Conference cancelled due to political turmoil).

40. Rishi Sharma, S.N.Maiti, "Studies on PP/SEBS-g-MA Blends," Poster Presentation in Asian Polymer Association International Conf., Organized In UICET, Punjab University, Feb. 21-23, 2013.

41. S.N.Maiti, " Effect of crystallinity in the mechanical properties of semi-crystalline polymer containing blends and composites,"APM Coference, CIPEt-Lucknow, Feb.27-March 2, 2013,Invited Lecture.

42. Rishi Sharma, S.N.Maiti, "Studies on Rheological Properties of PP/SEBS--g-MA Blends," Poster Presentation in FAPS Polymer Congress and Macro 2013, IISc Bangalore,May 15-18, 2013.

43. S.Kumar, B.K.Satapathy, S.N.Maiti,"Evaluation of post-yield fracture performance of polyamide-612/poly-ethylene-octene-g-maleic anhydride blends," Proceedings of 3rd Asian Coference on Mechanics of Functional Materials and structures, New Delhi, India, 2013.

44. S.Kumar, B.K.Satapathy, S.N.Maiti, "Morphological, rheological and Thermal properties of polyamide-612/ poly(ethylene-octene) elastomer Blends," 3rd FAPS Polymer Congress and MACRO 2013, Bangalore, India.

45. S.Kumar, B.K.Satapathy, S.N.Maiti, "Structural, mechanical, and dynamic Mechanical analysis of toughened polyamide -612/ halloysite nanotube Ternary nanocomposites," 7th International Conference on Materials for Advanced Technologies(ICMAT), Suntech, Singapore,2013.

46. S.Kumar, B.K.Satapathy, S.N.Maity, "Morphological, rheological and Dynamic mechanical analysis of toughened polyamide-612/ halloysite Nanotube filled ternary nanocomposites," APA International Conference on Polymers : Vision and Innovations, New Delhi, India, 2014.

47. Achla Tripathi, Rajendra Singla, S.N.Maiti, "Studies on Biodegradable Polymer Systems: PLA/Starch and PLA/Lignin Composites," APM Conference, CIPET, Bhubaneswar, February 132-16,2014, Invited Lecture.

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Service as Board, Senate, Selection Committee Member at other IITs, NITs, Universities

- Member, Curricular Development Committee, BHU
- Member, Selection Board, Punjab University, Chandigarh
- Member, Board of Studies, in Central Institute of Plastics Engg. & Tech. (CIPET)
- Member, Board of Studies, Bhaskarachrya College of Engineering, Delhi University
- Member, Curriculum Development Committee, BIT, Meshra

Service as PhD Thesis Examiner at other institutions

- IIT Kgp, IIT Bombay, IIT Roorkee, SSJM University Kanpur, Orissa University, Cochin University, Anna University, Jamia Milia Islamia, Calcutta University, Punjab University

Service as Technical Expert on Committee; MHRD, DST, DSIR, DRDO, PAN IIT, Ministry in State, Local or Central

- Member, Advisory Committee Member (PAC), DST, Govt. of India
- Chairman and Member, Project evolutions Committee, Dept. of Electronics and Information Technology, Govt. of India
- Member Assessment Board, DST, Govt. of India
- Member Subject Expert Committee on Engg. Sciences, FIST, DST, Govt. of India

Technical Expert on Policy, Regulatory, Laws, Standard Committees

- Member Editorial Board, Journal of Plastics Film & Sheeting, USA
- Executive Member, Polymer Processing Society, USA
- Executive Member, Asian Workshop on Polymer Processing, Japan
- Member, PLASTINDIA Committee, India

Member of Board/Advisory Board of Public and Private Sector Corporations

- Member, Research Advisory Council, GAIL, India
- Member, Board of Governor, Indian Institute of Packaging, Mumbai

Membership:

- Fellow Indian Plastic Institute
- Member, National Academy of Science India
- Member, National Science Congress, India
- Founding Member and Secretary, Polymer Processing Academy, India
- Life Member, Indian Institute of Chemical Engineers, India
- Life member, Indian Plastics Institute, India
- Member, Association of Roto Moulders, USA
- Member, Materials Research Society of India
- Member, Society of Polymer Science, India
- Member Fibre Forum India

Professional Activities:

- Co-Chairman, Executive Committee, Asian Polymer Association, New Delhi
- Member Scientific Committee, Indo Swiss Technical Symposium
- Secretary, Polychar 16, World forum on Advanced Materials, Lucknow
- Coordinator, Technical Committee on Polymer Packaging, IIP
- Organizing Member, Workshop on "Nanotechnology", IIT Delhi
- Convener, PG Diploma Course, Indian Institute of Packaging, New Delhi
- Member, All India Council of Technical Education (AICTE)
- Member, Council of Science and Industrial research (CSIR), India
- Member, Plastic Waste Management Committee, MOEF, Govt of India
- Member, Indian Centre for Plastics in the Environment, Mumbai
- Member, Innovation Award Committee, CIPET, DCPC, Govt. of India
- Member, National Institute of Science Communication and Information Resources,
- Member, Educational Committee India Ltd., Noida,
-
- Member, Facility Development on "Micro- Compounding" at IIT Delhi
- Member, Facility development on "Ultra Microtone" (For TEM analysis of nanocomposites) at IIT Delhi

Technology Developed:

1. ***Multi functional Hinge joint of Advance polymer composites For Polio and Cerebal Palsy Patients*** IIT Delhi prepared 500 joints in modified mold for the field trials which was further fitted with ALIMCO size 2 rod. 50 pair of prepared joints sent to ALIMCO, NIMS and Bikaner Medical College for field trials.

2. ***Cawl panel used in tractors made from PP/Nanoclay Composites***

Achievements

- Compared to target material (Xenoy), developed PP nanocomposites have better flexural properties but lower in terms of tensile properties.
- Significant improvements are achieved at lower clay loading (as low as 0.5wt%) which offer advantages in terms of cost and processability.
- Compositions for PP/clay nanocomposites with optimum balance of mechanical properties have been achieved
- Composition with optimum balance of mechanical properties for elastomer toughened PP/clay nanocomposites has been achieved.

Patents in Last 5 years

1. ***"Radial Impregnation Die (RID) for Rapid Processing of Continuous Fiber Thermoplastic Composites",*** K. Senthil Kumar, N. Bhatnagar & A. K. Ghosh, Indian Patent No. 258/DEL/2008.

2. ***"A Composition with High Mechanical and Thermal Properties and Electromagnetic Transparency"*** Submitted to Indian Patent Office (2009)
3. ***" An Apparatus & Method for Controlling Distribution and Dispersion of Nano Particles in Polymers***" Submitted to Indian Patent Office (2009)

4. ***"Multi functional Knee Joint of FRP Composites For Polio and Cerebal Palsy Patients Indian"*** *Patent No.1832/DEL/2009*

Innovation of Product, Process, Designs

Multi functional Hinge joint of Advance polymer composites For Polio and Cerebal Palsy Patients IIT Delhi prepared 500 joints in modified mold for the field trials which was further fitted with ALIMCO size 2 rod. 50 pair of prepared joints sent to ALIMCO, NIMS and Bikaner Medical College for field trials.

Sponsored Project with another Faculty of C.P.S.E.

(2008-2011) **Design & Development of Advanced composites' Hinge Joint** (Rs. 49 lakhs) with NRB, DRDO

(2008-2010) **Processing of Smart Biodegradable Polymeric Composites,** RMIT, Malebarn, Australia (Rs. 5.50 lakhs)

(2006-2009) **Intelligent Processing of Advanced Polymeric Materials** with DST, Govt. of India, (Rs. 130 lakhs) with research fund of Rs. 26 lakhs from Reliance Industries Ltd., Mumbai

(**2006–2008)** **Functionalized Imide Oligomers for Use in High Performance Thermosetting Resin Systems** Solvay, USA (Rs. 9.00 Lakhs)

Sponsored Project with another Faculty of IIT D but from out of C.P.S.E.

(2012-2015) **Designer biodegradable copolymers from renewable resources: Evaluation of Properties & Applications,** Dept. of Biotechnology (Rs. 80 lakhs)
-Prof. Harpal Singh (C.B.M.E)

(2010-2015) **Development of Light Weight Ballistic Materials System For Body, Vehicle And Structural Armors**, Grand Challenge Project of IIT Delhi (Rs. 100 lakhs)
-Prof. Naresh Bhatnagar

List of Industry consultancy Details

(2012-2013) **Benchmarking of Plasma Polymerized Modified Hollow Fibre Membranes,** (Rs. 08.50 lakhs), Applied Membrane Tech Inc.,USA

(2011-2012) **Polymer Nanocomposites: Application & Development,** (Rs. 10.0 lakhs)**,** with John Deere India Ltd. Pune

(2010-2011) **New-Gen Polyolefin Films for Hygiene Applications** (Rs. 9 lakhs) with The Proctor & Gamble Co., USA

(2007-2009) **Thermoforming of PP Sheets for Industrial Applications,** Reliance Industries Ltd., Mumbai (Rs. 30 lakhs)

List of Ph. D student supervised Independently(Completed & ongoing)

S.No	Name of student	Ph. D. Title	Status
1	Mayank Dwivedi 2010	***Studies on Radar Transparent High Performance Polymeric Nanocomposites***	Completed
2	Sangita Nandi (2008)	***Structure Property Relationship Of Carbon Nanofiber Reinforced Polypropylene Composite***	Completed
3	G. S. Anantha Padmanabha (2005)	***Impact Toughening and Mouldability characteristics of PBT and PEO Blends***	Completed
4	Sandeep Tyagi(2002)	***Flow Induced Morphology Development During Melt-Mixing in PP/EVA Blends***	Completed
5	Manash Jyoti Kashyap	***Structure-Property relationship & film Processing of PP nanocomposites***	In Progress
6	Priyanka Singh	***Studies on Composite of Nanoreinforced Metrix***	In Progress
7	Anindya Dutta	***Microcellular Processing of Polypropylene***	In Progress

List of Ph. D student supervised jointly (Completed & ongoing)

S.No	Name of student	Ph. D. Title	Co-Supervisor	Status
1	Sneh Bharti (2014)	***Preparation and Characterization of Polyaniline Based on Propylene Ethylene Copolymer Composites***	Dr. J. Jacob -	Completed
2	Saikat Banerjee(2011)	***In-Process Analysis of Polymeric Nanocomposites***	Dr. Mangala Joshi	Completed
3	Satpal Singh (2011)	***Studies on Nanocomposite Film Based on PLA Blends***	Prof. S.N. Maiti	Completed
4	Ms. Kavita Abrol(007)	***Studies on Functionalisation of Polymers for Immobilization of Lipases***	Dr. G.N. Qazi, Director, RRL, Jammu	Completed
5	K. Senthil Kumar(2007)	***Development And Analysis of Long Fiber Reinforced Thermoplastic Composites***	Dr. N. Bhatnagar, Mechanical Engg.	Completed
6	Dilip Kumar Kolluri(2008)	***Role of Graphite on Performance Properties of Friction Materials***	Dr. J. Bijwe, ITMMEC	Completed
7	Mr. Jay Kisor Pal (2005)	***Studies on Development of Environmentally Degradable Polyethylene***	Prof. Harpal Singh, CBME	Completed
8	Ms. Bhawna Kulshreshtha (2003)	***Reactive Processing and Characterization of PBT/Epoxy Blends***	Prof. A. Misra, CPSE	Completed
9	Ms. Purnima Jain (2001)	***Studies on Reactive Blending and Structure Development of PP Based Blends***	Prof. A. Misra, CPSE	Completed
10	Ms. J. Indumati (2000)	***Friction and Wear Studies on Polyetherimide and Composites***	Dr. J. Bijwe, ITMMEC	Completed
11	Satish Kammoji	***Studies on Thermofoaming Medium Gauge HIPS sheets***	Prof. N. Bhatnagar	Submitted
12	Shikha Jain (2014)	***Studies on Poly(Lactic acid)(PLA)/Talc Composite Films***	Prof. A. Mohanty(University of Guelph)	Submitted
13	Jutika Goswami (2013)	***Studies on Microcellular Poly(Lactic Acid)Based Blends and Composites***	Prof. N. Bhatnagar Dr. Sujata Mohanty (AIMS)	Submitted
14	Sanjeev Kumar	***Foam Injection Molding of PLA and its Blends for Biomedical Applications***	Prof. N. Bhatnagar	In-progress
15	Mohd. Tahir Zafar	***Studies on Jute Fibre Reinforced Poly(lactic acid) Composites and their Foams***	Prof. A. Mohanty (University of Guelph)	In-progress
16	S. Sabapathy	***Studies on Foaming Process of PLA***	Prof. Chul Park	In-progress
17	Swarna	***Rheological Characterization of Shear Thickening Fluid***	Dr. Sudeep Patnayak	In-progress
18	Rajendra Singla	***PLA-Lignin composites***	Prof. S.N. Maiti	In-progress

List of M.Tech Projects Supervised

S. No.	Name of Students	Thesis Title	Status
1	Anindya Dutta 2013	Studies on Cellular Polypropylene nanocomposites and blends	Completed
2	Nilesh Ramesh Bakare 2013	Studies on Polyamide 6,6/ ULDPE-g-MA/ Clay Nanocomposites	Completed
3	Sayantani Basu 2013	Application of Microfluidic Reactor/ ultrasound Reactor for preparation of Poly(HCCTP-Co-BPEI) Microspheres under Precipitation Conditions	Completed
4	Sabapathy Shankar 2012		Completed
5	Dipanjan Saha 2012	Studies on Rheology & Processability of PP/Clay nanocomposites and Elastomer Toughening of The Nanocomposites	Completed
6	Nandini Mehta 2012	Studies on Extrusion Process of Microcellular Thermoplastic Sheet using Chemical Blowing Agents	Completed
7	Sanjukta Bose 2011	studies on processing and properties of hdpe-poss nanocomposites	Completed
8	Ved Prakash 2011	biodegradable composites based on poly lactic acid and jute fibre	Completed
9	Jubaraj Bhattacharya 2011	Studies on process and properties of caco3 filled lldpe films	Completed
10	Rangksan Mawroh 2011	Studies on non-woven pp fabric and Lldpe film by plasma treatment	Completed
11	Indranil Banerjee 2010	Studies on talk filled composites of hdpe-pp blend	Completed
12	Harpreet kaur 2010	Studies on properties of polypropylene/thermoplastics elastomer/clay nanocomposite	Completed
13	Rajdeep Majumder 2010	Studies on fibrillation of ptee in ps and pmma matrices	Completed
14	Jitender Kumar	Studies of pp foam & pp/pp-g-ma/nc foam	Completed
15	Mohd. Tahir Zafar 2009	"Studies on the PP/PS Blends"	Completed
16	Mitu Arora2009	"Studies of Polypropylene Composites Based on Inorganic and organic Fillers"	Completed
17	Vartika Joshi2009	"Studies on Poss/Polysiloxane Nanocomposites"	Completed
18	Pooja Daswani 2008	Reversible transfer of hybrid microgels from organic to aqueous phase	Completed

19	Shikha Jain 2008	Studies on polyethylene based nanocomposites films for packaging application	Completed
20	Ashish Tyagi2008	Injection molding of long glass fiber reinforced nylon6 composites	Completed
21	Sharmishtha Bhattacharjee 2007	*Studies on Nucleation and Crystallization Kinetics in Semi-crystalline Polymers in Presence of Nanofillers*	Completed
22	Ranjan Kumar Kamat 2007	*Studies on Polypropylene Carbon Nanofibre Composites*	Completed
23	P. Shyam Kumar 2007	*Thermoforming of PP Sheets for Industrial Applications*	Completed
24	Nitin sharma (2006)	*Studies on Thermal, Mechanical & Rheological Behaviours of Blends of Linear and Branched Polycarbonates*	Completed
25	Satpal Singh (2006)	*Development of Porous Polymer Film for Immobilization of Bioactive Material*	Completed
26	Sudeep Biswas (2006)	*Studies on Viscoelastic Properties and Structure Property Correlations for PP EPDM Blends*	Completed
27	Ghanshyam Pandey (2006)	*Development of Copolymers of PET for Film Applications*	Completed
28	Arpita Karak (2005)	*Hybrid Particles Functionalized with Noble Metals*	Completed
29	Ruchi Pandey (2005)	*Studies on Dispersion of Micro and Nano Sized Particulates in Thermoplastic Compounds*	Completed
30	Anurag Kalra (2005)	*Studies on EVA/m-POE (Metallocene Polyolefin Elastomer) Blended Foam*	Completed
31	Vijay Kumar Patel (2005)	*Development of Long Fibre Reinforced Thermoplastic Composite based on Polyamide 6*	Completed
32	S.H. Kameshwari Devi (2005)	*Development of HDPE Based Nanocomposites for Specified Applications*	Completed
33	Sachidanand Prasad (2005)	*Studies on PBT/ABS Blends and Their Talc Filled Composites*	Completed
34	Sanchita Bhattacharya (2004)	*Hybrid Polymeric Magnetic Particles*	Completed
35	Vitthal Abaso Sawant (2004)	*Studies on Polypropylene/clay Nanocomposite*	Completed
36	Abhishek Singh (2004)	*Studies on Polypropylene/Polyethylene-Octene Blends and Its Ternary Composite with Nano-Clay*	Completed

37	Neeraj Jain (2004)	*Studies on EVA-Clay Nano Composite*	Completed
38	Balaji Gopalakrishnan (2004)	*Process Parameter Optimization in Injection Moulding using Statistical Techniques*	Completed
39	Anirudh Singh (2003)	*Investigation of the Effect of Material Properties on the Simulated Acoustic Behaviour of Plastic Parts*	Completed
40	Mahendra Pal (2002)	*Studies on Casting of Glass Fibre Reinforce Acrylic Sheet*	Completed
41	Ashok Kanojia (2002)	*Studies on Impact Toughening of Polybutylene Terephthalate*	Completed
42	Vipul H. Prajapati (2002)	*Flow Analysis and Design of Basket Mill Impellers for the Development and Manufacturing of Points*	Completed
43	Mohanraj G.T. (2001)	*Study on Evolution of Morphology during Mixing of a Polymer Blend in a Screw Extruder*	Completed
44	Sachin Avatade (2001)	*Development, characterization and tribo-evaluation of fabric reinforced PES composites*	Completed
45	M. Soni, (2001)	*Design, Manufacture and Testing of an Experimental Tape Slit Die for Thermoplastic Extrusion*	Completed
46	P. Maiti, (2000)	*Studies on Blends of Poly(e-caprolactone) and Low Density Polyethylene.*	Completed
47	B. John, (2000)	*Resin Transfer Moulding (RTM) System Development and Parameter Study*	Completed
48	Pulak Dutta, (2000)	*Effect of Processing Parameters on Performance Properties of Engineering Plastics*	Completed
49	S. Sen, (2000)	*Morphological and Tribological Studies of PEEK/PTFE Blends*	Completed
50	P. Goel, (1999)	*Inclusion Complexes of a-Cyclodextrin and Polyethylene as Compatibilizers for Polyethylene/Starch Blends.*	Completed
51	C. Siddhu, (1999)	*Study And Analysis Of Residual Stresses In Thermoformed Polycarbonate Sheets*	Completed
52	P. Singh, (1998)	*Modification of Polypropylene for BOPP Film applications*	Completed
53	S. Pal, (1998)	*Development of Filled Engineering Thermoplastics Based on Polycarbonate*	Completed

54	S. Roy Chaudhury, (1998)	*Study of Emulsion Prepared by Static Mixer and process Optimization*	Completed
55	N. Sathya Narayan, (1997)	*Melt Mixing Behaviour of Polymer Blends in a Screw Extruder*	Completed
56	S. Chawla, (1997)	*Reactive Processing of PPCP-PBT Blend*	Completed
57	Jeya Kumar, (1997)	*Formulation and Tribo-Evaluation of Poly (ether Sulphone) Composites*	Completed
58	K. Bharadwaj, (1996)	*Study on Thermoforming of Polycarbonate Sheets and Related Residual Stress Analysis*	Completed
59	S. Goswami, (1996)	*Modification of Polypropylene for Extrusion Coating Applications*	Completed
60	Samarjit Ghosh, (1994)	*Effect of Viscosity Ratio and Mixing on Blend Morphology Development in a Single Screw Extruders*	Completed
61	S. Sukumar, (1994)	*Measure of Mixing of Polymers in the Melting Zone of Screw Extruders*	Completed
62	A. Roy Choudhary, (1993)	*Toughened Nylon-6 through Reactive Blending*	Completed
63	Susanta Mitra, (1993)	*Studies on PMMA/Plasticized PVB and PMMA/SEBS Blends*	Completed
64	Yatin Nandedkar, (1992)	*Studies on Blends and Composites Based on Nylon6/PP/PVB System*	Completed
65	Mahesh Ch. Pathak, (1992)	*Studies on Morphology Development of a Binary Blend in the Die Zone of a Single Screw Extruder.*	Completed
66	Dibyendu Das, (1992)	*Mixing Phenomenon in a Single Screw Extruder - Structure Development and Process Optimization*	Completed
67	S. Rajesh, (1991)	*Development of Blend Morphology in the Die Zone of the Extruder*	Completed

CONFERENCE PAPERS PRESENTED

1. ***Studies on Melt Processed LLDPE/PAN i-MDSA Composites;*** Sneh Bharti, Josemon Jacob, Anup K. Ghosh; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

2. ***Studies on Poly (Lactic Acid)/Poly (Caprolactone) Blends: Thermal, Morphological, Rheological and Mechanical Behavior;*** Shikha Jain, Amar K. Mohantyb, Manjusri Misrab, Anup K. Ghosh; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

3. ***Solid-State Foam Processability and Morphological Evolution of Plasticised Poly (Lactic Acid);*** Sabapathy Sankar, Anup K. Ghosh; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

4. ***Solventless PU/Nanoclay Nanocomposite Coatings: A Novel Approach to Protect Steel from Corrosion;*** Mangala Joshi, Mansi Gupta, Upashana Chatterjee, A. K. Ghosh, D Yugendar, K. V. Vidya Sagar; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

5. ***Thermal, Mechanical and Morphological Properties Evaluation of Polylactide (PLA)/Thermoplastic Starch (TPS) Blends;*** Rajendra Kumar, S. N. Maiti, Anup K. Ghosh; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

6. ***Development of Composite Materials for Polymeric Orthotic Hinge Joint***; Priyanka Singh, Mayank Dwivedi, Naresh Bhatnagar, Anup K. Ghosh; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

7. ***Studies on the Thermoforming of Medium-Gauge High Impact Polystyrene Sheets;*** Satish Kommoji, Ritima Banerjee Anup K. Ghosh; Asian Workshop on Polymer Processing (AWPP-2013), December 8th, 2013, Goa, India

8. ***Heterogeneous Nucleation and Microcellular Foaming of Poly(Lactic Acid);*** Goswami Jutika, Ghosh Anup Kumar, Bhatnagar Naresh; Polymer Processing Society Asia/Australia Conference (PPS-2013), December 4th, 2013, Mumbai, India

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17. ***"Nanostructured Polyurethane-Clay Clear Coatings With Enhanced Performance Properties: An Inspiration from the Ancient 'Maya Blue' Paintings"*** ECNP Conference 2012 Institute of Macromolecular Chemistry Prague, Czech republic 22-27 April, 2012.

18. ***Development of Poly(Lactic acid)/Poly (ε-Caprolactone) Blends as Biomedical Scaffold;*** *Jutika Goswami, A. K. Ghosh, N. Bhatnagar, S. Mohanty;* APA International Congress on Advances in Human Healthcare Systems, February 20-23, 2012, New Delhi, India.

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20. ***Film Processability and Morphology of Blends and Nanocomposites based on Poly(lactic acid)*** PPS Americans Conference, Niagara Falls, Canada, May 21 – 24, 2012, A.K. Ghosh ,

21. ***Rheology and Structure - Property Relationship of ABS-Clay Nanocomposites,*** P. Singh, A.K. Ghosh**,** PPS Americans Conference, Niagara Falls, Canada, May 21 – 24, 2012

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26. ***"Property dependance of Polyurethane-clay nanocomposite coatings on processing variables."*** Polymer Science & Engineering: Emerging dimensions. Chandigarh 26-27 November, 2010.

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2. Polymer Processing Society Asia/Australia Conference (PPS-2013), December 4-7, 2013, Mumbai, India

3. 3rd FAPS Polymer Congress and MACRO-2013, May 15-18 2013 at IISc, Bangalore, India

4. International conference on Advances in Polymeric Materials, February 8-10, 2013, CIPET Lucknow, India

5. ANTEC, December 6-8, 2012, Mumbai, India

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2. M H Alaei, R Kumar, P. Mahajan, P Singh, A K Ghosh, N Bhatnagar, " ***Design and Development of an Offset Lightweight Polymeric Orthotic Knee Joint for Polio and Cerebral Palsy Patients*"** Indian Journal of Biomechanics , Volume 4, page 1-6, 2013

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5. Sumanda Bandyopadhyay, Rajgopal Iyer, Rajdeep Majumdar, Bhabani K Satapathy and Anup Ghosh ***"Studies on Wear Properties of Polystyrene in the presence of Fibrillated Network of Polytetrafluoroethylene,"*** ISRN Polymer Science,2013

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8. Sneh Bharti, Josemon Jacob, Anup K. Ghosh ***"Polyaniline Doped with α,ω-Alkanedisulfonic acids: Their Preparation and Characterization"*** Polymer International, 2012 (In press)

9. Sangita Nandi, Susanta Mitra, Sanjukta Bose, Anup K. Ghosh, ***"Dynamic Rheology and Morphology of HDPE- Fumed Silica Composites: Effect of Interface Modification"*** Polymer Engineering and Science, 2012 (In press)

10. Satpal Singh, Anup K. Ghosh, S. N. Maiti, S. Raha, Rahul Gupta and S. N. Bhattacharya, ***"Morphology and rheological behaviour of Polylactic acid (PLA)/clay nanocomposites".*** Polymer Engineering & Science, Volume 52, Issue 2012.

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Continuing Education/Courses for Industries

- Technical Training Program on "Polymer materials and Processing"- PVC Technology & Knowledge Management for DCM SRIRAM Consolidated Limited, Gurgaon, 2013

No. of students (PhD/Masters) directly linked to industry funded projects

- Ph.D - 1
- M.Tech - 15

Dr. Josemon Jacob

Complete list of papers

59. “Interplay of α,α- versus α,β- conjugation in the excited states and charged defects of branched oligothiophenes as model compounds for dendrimers” R. C. Gonzalez-Cano, G. Saini, J. Jacob, J. T. L. Navarrete, J. Casado, M.C. Delgado, *Chemistry: A European Journal*, **2013**, *19*, 17165-17171.

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17. “Up-conversion Photoluminescence in poly(ladder-type pentaphenylene) doped with Metal(II)-octaethylporphyrins” S. Baluschev, P. E. Keivanidis, G. Wegner, J. Jacob, A. C. Grimsdale, K. Muellen. *Appl. Phy. Lett* **2005**, *86,* 061904.

16. “Switching of the fluorescence emission of single molecules between the locally excited and charge transfer states” Izquierdo, M. A., Bell, T. D. M., Habuchi, S., Fron, E., Pilot, R., Vosch, T., De Feyter, S., Verhoeven, J., Jacob, J., Muellen, K., Hofkens, J., De Schryver, F. C. *Chem. Phy. Lett*. **2005**, **401**, 503-8.

15. “Preparation of ladder-type pentaphenylenes: efficient emitters and electron accepting materials via a common intermediate” J. Jacob, S. Sax, T. Piok, E. J. W. List, A. C. Grimsdale and K. Muellen, *J. Am. Chem. Soc*., **2004**, *126*, 6987-95.

14. “Collective orientation dynamics in semi-rigid polymers” E. Somma, B. Loppinet, G. Fytas, S. Setayesh, J. Jacob, A. C. Grimsdale, K. Muellen *Colloid and Polymer Science*, **2004**, *282*, 867.

13. “Progress towards stable blue light-emitting polymers” J. Jacob, L. Oldridge, J. Zhang, M. Gaal, E.l J. W. List, A. C. Grimsdale, K. Muellen *Curr. Appl. Phys*. **2004**, *4,* 339-42.

12. “New electron-rich conjugated polymers” F. Dierschke, J. Jacob, A. K. Mishra, A. C. Grimsdale, K. Muellen. *Polymer Preprints* **2004**, *45*, 170-71.

11. “Poly(tetraarylindenofluorene)s: New stable blue-emitting polymers” J. Jacob, J. Zhang, A. C. Grimsdale, K. Muellen, M. Gaal, E. J. W. List *Macromolecules*, **2003**, *36*, 8240-45.

10. “Cobalt catalyzed selective cross coupling of imines with diallyanilines for the synthesis of quinoline derivatives” J. Jacob, W. D. Jones *J. Org. Chem*. **2003**, *68*, 3563-68.

9. “Cobalt catalyzed selective conversion of diallylanilines to quinolines” J. Jacob, W. D. Jones, S. A. Godleski, R. R. Valente *J. Molecular Catalysis A:* **2002**, *182-183*, 565-70.

8. “Nickel mediated selective carbonylation routes to thiocarbamates” J. Jacob, K. A. Reynolds, W. D. Jones, S. A. Godleski, R. R. Valente *Organometallics*, **2001**, *20*, 1028-31.

7. “Kinetics and crystallographic studies of the ligand monomerization of a Re(V)oxo dimer” J. Jacob, G. Lente, I. A. Guzei, J. H. Espenson *Inorganic Reaction Mechanisms* **2000**, *2*, 169-77.

6. “Monomerization of a Re(V) dimer by ligation” J. Jacob, G. Lente, I. A. Guzei, J. H. Espenson *Inorganic Chemistry*, **1999**, *38*, 3762-63.

5. “Synthesis and structural characterization of novel terminal and bridging Re(V)-sulfido complexes” J. Jacob, I. A. Guzei, J. H. Espenson *Inorganic Chemistry*, **1999**, *38*, 3266-67.

4. “Stereospecific rhenium catalyzed desulfurization of thiiranes” J. Jacob, J. H. Espenson *Chemical Communications*, **1999**, *11*, 1003-04.

3. “Synthesis, structure and reactivity of noveldithiolato(oxo)rhenium(V) complexes” J. Jacob, I. A. Guzei, J. H. Espenson *Inorganic Chemistry*, **1999**, *38*, 1040-41.

2. “1,3-Transposition of allylic alcohols catalyzed by methyltrioxorhenium”J. Jacob, J. H. Espenson, J. H. Jenson, M. S. Gordon *Organometallics*, **1998**, *17*, 1835-40.

1. “Selective C-H bond activation of arenes catalyzed by methylrheniumtrioxide” J. Jacob, J. H. Espenson *Inorganica Chimica Acta*, **1998**, *270*, 55.

List of conferences/workshops attended

Macro2013 conference, Bangalore, May 15-18, 2013 (invited speaker)

National workshop on Polymer based Solar Cells, Pune, April 21-22, 2012 (invited lecture)

National symposium on Innovations in Polymers for Sustainability and Growth, Bhaskaracharya College of Applied Sciences, Delhi, March 2-3, 2012 (Invited Lecture)

International conference on Advances in chemical sciences and applied materials, IIT Delhi, August 10-11, 2011 (invited lecture).

List of MTech projects supervised (independent)

S. No.	Name	Thesis Title
1	Mousumi Bose	STUDIES ON LIGNIN BASED POLYCAPROLACTONE BLENDS
2	M. Moronshing	SYNTHESIS AND CHARACTERIZATION OF ALIPHATIC POLYESTER BASED TRIBLOCK COPOLYMERS AND THEIR NANOCOMPOSITES
3	Mohammad Adil Afroz	SYNTHESIS AND CHARACTERIZATION OF POLY(N-VINYL IMIDAZOLE) AND ITS SALTS
4	Reshu Tyagi	SYNTHESIS OF BLUE-EMITTING COPOLYMERS BASED ON FLUORENE AND BIPHENYL DERIVATIVES

5	Jyoti Sharma	SYNTHESIS AND CHARACTERIZATION OF P3FM-B-PMMA AND P3FM-B-PMMA-B-P3FM BY ATRP
6	Debanga Bhusan Konwar	SYNTHESIS AND CHARACTERIZATION OF POLYESTER BASED TRIBLOCK COPOLYMERS AND THEIR NANOCOMPOSITES
7	Indu	SYNTHESIS OF BENZOTHIADIAZOLE BASED CONJUGATED MATERIALS FOR PHOTOVOLTAIC APPLICATIONS
8	Yameeni Sarothia	SYNTHESIS OF CYCLOPENTADITHIOPHENE BASED COPOLYMERS FOR SOLAR CELL APPLICATIONS
9	Renjana Nehra	Synthesis of triblock copolymers PS-b-PEG-b-PS
10	Hemlata Ujjwal	Synthesis of PMMA-b-PEG-b-PMMA triblock copolymers by ATRP
11	Dibyendu Das	Studies on flame retardant composites based on polyamide 6 and melamine salts
12	Naresh Kumar Sharma	Studies on glass fibre reinforced thermoplastic polyurethane composites
13	Arun Kumar	Studies on soluble PPS analogues
14	Poonam Chetani	Studies on zinc oxide-polypropylene nanocomposites
15	Meenakshi Verma	Studies on P3HT and PPV based conjugated materials for polymer solar cells

List of MTech projects supervised (jointly)

S. No.	Name	Thesis Title
	Larry Philippose	UHMWPE BASED BLENDS AND COMPOSITES
	Bindu Manchanda	Development of silicon hydrogels for applications in contact lenses
	Achla	Sulfonated polyimide-POSS based proton exchange membranes for fuel cell applications

List of PhD projects supervised (independent)

S. No.	Name	Thesis Title
1	Dr. Geeta Saini	Synthesis, characterization and photovoltaic studies of thiophene based low band gap materials
2	Dr. Piyush Anant	Synthesis and Characterization of 4,4'-Bis(2,1,3-benzothiadiazole) Based Conjugated Materials for Electronic Applications

3	Dr. Sunil Dhamaniya	Synthesis of polyesters based on tartaric acid derivatives
4	Ms. Manisha Tomar	Synthesis of N-heterocycle based conjugated materials for potential electronic applications

List of PhD projects supervised (jointly)

S. No.	Name	Thesis Title
1	Ms. Sneh Bharti	Studies on melt processable α,ω-alkanedisulfonic acid doped polyaniline and its thermoplastics composites

List of Sponsored Projects (individually)

S. No.	Project Title	Amount	Status
1	Synthesis of conjugated organic materials for use in LEDs and photovoltaics (DST sponsored)	23 lakhs	completed
2	Conjugated polycations: synthesis and device testing (DST and Max Planck Socitey)	80 lakhs	completed
3	Synthesis and device studies on donor-acceptor type materials for photovoltaic applications	44.9 lakhs	ongoing

List of Sponsored Projects (jointly with another faculty of CPSE)

S. No.	Project Title	Amount	Status
1	Title (jointly with Prof. Veena Choudhary as PI and Prof. A. K. Ghosh, Prof. S. Maiti, Dr. B. K. Satapathy and Dr. J. Jacob as co-PIs)	6 crores	ongoing

List of Sponsored Projects (with another faculty of IITD but outside CPSE)

S. No.	Project Title	Amount	Status

1	Design and Fabrication of Organic Solar Cells Using Organic-Inorganic Semiconductor Hybrid Absorber (Co-PI, MNRE sponsored, with Prof. Viresh Dutta from Centre for Energy Studies, IIT Delhi as PI)	130 lakhs	completed
2	Non-Silicon Based Technologies for Nanofabrication and Nanoscale Devices (Co-PI, with 3 PIs and 8 Co-PIs from various departments within IIT Delhi)	~50 crores	ongoing

List of Industry Consultancies

S. No.	Project Title	Amount	Status
1	Amino PPX monomer development (jointly with Prof. A. K. Ghosh) sponsored by Vasmed Technologies, Dubai	Rs. 2.34 lakhs	Completed
2.	Analysis of rubber vulcanizates (jointly with Prof. S. N. Maiti)	Rs. 25,000	Completed
3.	Synthesis of AMPS (jointly with Prof. Veena Choudhary), sponsored by Pasupati Acrylics	Rs. 5 lakhs	Completed

Service as PhD thesis examiner at other institutions

Thesis examiner for thesis from IIT Bombay (1), IISc Bangalore (2), IIT Gauhati (1), Mahatma Gandhi University (1) and Osmania University (1).

Award to Faculty

Max Planck Partner Group, 2008-12

Short-listing criteria for admission to PhD program

For General/OBC category candidates

i) 65% marks in aggregate or a CGPA of 7.25 on a 10.00 point scale in MSc in relevant areas with either a GATE score of 450 and above or CSIR/UGC NET

ii) MTech in relevant areas with a minimum of 70% marks in aggregate or a CGPA of 7.75 on a 10.00 point scale.

iii) BTech in relevant area with 75% marks or a CGPA of 8.0 with a GATE score of 450 or above

iv) For all applicants, the grades for the latest qualifying degree will be considered. For all applicants in the final semester of their qualifying degree, their performance till the preceding semester (preceding year if their programmes are year based) will be considered.

For SC/ST/PH category candidates

i) 60% marks in aggregate or a CGPA of 6.75 on a 10.00 point scale in MSc in relevant areas with either a GATE score of 300 and above or CSIR/UGC NET

ii) MTech in relevant areas with a minimum of 65% marks in aggregate or a CGPA of 7.25 on a 10.00 point scale.

iii) BTech in relevant area with 70% marks in aggregate or a CGPA of 7.50 on a 10 point scale with a GATE score of 300 or above

iv) For all applicants, the grades for the latest qualifying degree will be considered. For all applicants in the final semester of their qualifying degree, their performance till the preceding semester (preceding year if their programmes are year based) will be considered.

For Sponsored Candidates

For part time/sponsored candidates, admission will be as per Institute rules.

Seminars held

30 seminars in the last 4 years

Dr. B. K. Satapathy

[1] Complete list of papers

1. R.K. Kachhap, B.K. Satapathy, Synergistic effect of tungsten disulfide and cenosphere combination on braking performance of composite friction materials, Materials & Design, 56 (2014) 368-378.
2. D. Das, B.K. Satapathy, Designing tough and fracture resistant polypropylene/multi wall carbon nanotubes nanocomposites by controlling stereo-complexity and dispersion morphology, Materials & Design, 54 (2014) 712-726.
3. A. Tiwari, H.S. Jaggi, R.K. Kachhap, B.K. Satapathy, S.N. Maiti, B.S. Tomar, Comparative performance assessment of cenosphere and barium sulphate based friction composites, Wear, 309 (2014) 259-268.
4. S. Bandyopadhyay, R. Iyer, R. Majumder, B. Satapathy, A.K. Ghosh, Studies on Wear Properties of Polystyrene in the Presence of Fibrillated Network of Polytetrafluoroethylene, ISRN Polymer Science, 2013 (2013).
5. S. Basu, M. Singhi, B.K. Satapathy, M. Fahim, Dielectric, electrical, and rheological characterization of graphene-filled polystyrene nanocomposites, Polymer Composites, (2013).
6. M. Bindu, B.K. Satapathy, H.S. Jaggi, A.R. Ray, Size-scale effects of silica on bis-GMA/TEGDMA based nanohybrid dental restorative composites, Composites Part B: Engineering, (2013).
7. T. Singh, A. Patnaik, B. Satapathy, B. Tomar, Development and Optimization of Hybrid Friction Materials Consisting of Nanoclay and Carbon Nanotubes by using Analytical Hierarchy Process (AHP) and Technique for Order Preference by Similarity to Ideal Solution (TOPSIS) under Fuzzy Atmosphere, Walailak Journal of Science and Technology (WJST), 10 (2013) 343-362.
8. T. Singh, A. Patnaik, B.K. Satapathy, Thermo-mechanical characterization of nano filled and fiber reinforced brake friction materials, AIP Conference Proceedings, 1536 (2013) 259.
9. T. Singh, A. Patnaik, B.K. Satapathy, M. Kumar, B.S. Tomar, Effect of Nanoclay Reinforcement on the Friction Braking Performance of Hybrid Phenolic Friction Composites, Journal of materials engineering and performance, 22 (2013) 796-805.

10. T. Singh, A. Patnaik, B.K. Satapathy, Friction braking performance of nanofilled hybrid fiber reinforced phenolic composites: influence of nanoclay and carbon nanotubes, Nano, (2013).
11. N. Dayma, H.S. Jaggi, S. Kumar, D. Das, B.K. Satapathy, Time-Dependent Crack-Growth and Isochronous Strain Field Analysis of Polyamide-6/Polypropylene-Grafted-Maleic Anhydride/Nanoclay Ternary Nanocomposites, Macromolecular Materials and Engineering, (2013).
12. N. Dayma, H.S. Jaggi, B.K. Satapathy, Post-yield crack toughness behavior of polyamide-6/polypropylene grafted maleic anhydride/nanoclay ternary nanocomposites, Materials & Design, (2013).
13. N. Dayma, S. Kumar, D. Das, B.K. Satapathy, Melt-mixed PA-6/LDPE-g-MA/nanoclay ternary nanocomposite: Micro-mechanisms from post-yield fracture kinetics and strain field analysis, Materials Chemistry and Physics, 142 (2013) 640-650.
14. S. Dhamaniya, H.S. Jaggi, M. Nimiya, S. Sharma, B.K. Satapathy, J. Jacob, Synthesis, Characterization and Biodegradation Studies of Chain-Coupled Polyesters Based on Tartaric Acid, Polymer International, (2013).
15. H.S. Jaggi, B.K. Satapathy, A. Patnaik, N.C. Mehra, B.S. Tomar, Temperature dependence of friction and wear performance and thermomechanical response of flyash-filled brake composites, Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 227 (2013) 373-384.
16. H.S. Jaggi, A. Tiwari, B.K. Satapathy, A. Patnaik, Dynamic mechanical response and fade–recovery performance of friction composites: effect of flyash and resin combination, Journal of Reinforced Plastics and Composites, 32 (2013) 835-845.
17. S. Kumar, B.K. Satapathy, S.N. Maiti, Correlation of morphological parameters and mechanical performance of polyamide-612/poly (ethylene–octene) elastomer blends, Polymers for Advanced Technologies, (2013).
18. N. Dayma, H.S. Jaggi, B.K. Satapathy, Post-yield fracture behaviour of PA-6/LDPE-g-MA/nanoclay ternary nanocomposites: semiductile-to-ductile transition, Journal of Polymer Research, 19 (2012) 1-11.
19. S. Dhamaniya, D. Das, B.K. Satapathy, J. Jacob, Influence of block composition on structural, thermal, and mechanical properties of novel aliphatic polyester based triblock copolymers, Polymer, (2012).

20. S. Kumar, B.K. Satapathy, A. Patnaik, Thermo-mechanical correlations to erosion performance of short glass/carbon fiber reinforced vinyl ester resin hybrid composites, Computational Materials Science, 60 (2012) 250-260.
21. M. Kumar, B.K. Satapathy, A. Patnaik, D.K. Kolluri, B.S. Tomar, Evaluation of fade-recovery performance of hybrid friction composites based on ternary combination of ceramic-fibers, ceramic-whiskers, and aramid-fibers, Journal of Applied Polymer Science, 124 (2012) 3650-3661.
22. N. Dayma, D. Das, B.K. Satapathy, Kinetic and structural interpretations of post-yield crack resistance behavior of polyamide-6/polyolefin-g-maleic anhydride blends, Journal of Materials Science, 47 (2012) 4860-4875.
23. B.K. Satapathy, A. Patnaik, N. Dadkar, P. Rath, B.S. Tomar, Investigations on friction-fade and friction-recovery performance of phenolic composites based on fly ash–graphite combinations for braking applications, Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 226 (2012) 439-450.
24. H.S. Jaggi, Y. Kumar, B.K. Satapathy, A.R. Ray, A. Patnaik, Analytical interpretations of structural and mechanical response of high density polyethylene/hydroxyapatite bio-composites, Materials & Design, 36 (2012) 757-766.
25. T.G. Mamatha, A. Patnaik, S. Biswas, B.K. Satapathy, A.K. Redhewall, Thermo-mechanical and crack position on stress intensity factor in particle-reinforced Zinc–aluminium alloy composites, Computational Materials Science, 55 (2012) 100-112.
26. K. Goswami, I. Ramakrishnan, B.K. Satapathy, Effect of fumed silica incorporation in mechanical, rheological, properties of poly (dimethylsiloxane)-poly (vinylpyrrolidone) semi interpenetrating networks (PDMS-PVP semi IPN), Abstracts of Papers of The American Chemical Society, Amer Chemical Soc 1155 16th St, Nw, Washington, Dc 20036 Usa, 2012.
27. S. Tejyan, A. Patnaik, A. Rawal, B.K. Satapathy, Structural and mechanical properties of needle-punched nonwoven reinforced composites in erosive environment, Journal of Applied Polymer Science, 123 (2012) 1698-1707.
28. N. Dayma, B.K. Satapathy, Microstructural correlations to micromechanical properties of polyamide-6/low density polyethylene-grafted-maleic anhydride/nanoclay ternary nanocomposites, Materials & Design, 33 (2012) 510-522.

29. T. Singh, A. Patnaik, B.K. Satapathy, M. Kumar, Performance analysis of organic friction composite materials based on carbon nanotubes-organic-inorganic fibrous reinforcement using hybrid ahp-ftopsis approach, Composites: Mechanics, Computations, Applications, An International Journal, 3 (2012).
30. T. Singh, A. Patnaik, B.K. Satapathy, Effect of Carbon Nanotubes on Tribo-Performance of Brake Friction Materials, AIP Conf. Proc., 1393 (2011) 223-224.
31. S. Kumar, B. Satapathy, A. Patnaik, Viscoelastic interpretations of erosion performance of short aramid fibre reinforced vinyl ester resin composites, Journal of Materials Science, 46 (2011) 7489-7500.
32. B.K. Satapathy, A. Majumdar, H.S. Jaggi, A. Patnaik, B.S. Tomar, Targeted material design of flyash filled composites for friction braking application by non-linear regression optimization technique, Computational Materials Science, 50 (2011) 3145-3152.
33. B.K. Satapathy, A. Patnaik, N. Dadkar, D.K. Kolluri, B.S. Tomar, Influence of vermiculite on performance of flyash-based fibre-reinforced hybrid composites as friction materials, Materials & Design, 32 (2011) 4354-4361.
34. N. Dayma, B.K. Satapathy, A. Patnaik, Structural correlations to sliding wear performance of PA-6/PP-g-MA/nanoclay ternary nanocomposites, Wear, 271 (2011) 827-836.
35. M. Kumar, B.K. Satapathy, A. Patnaik, D.K. Kolluri, B.S. Tomar, Hybrid composite friction materials reinforced with combination of potassium titanate whiskers and aramid fibre: Assessment of fade and recovery performance, Tribology International, 44 (2011) 359-367.
36. S. Kumar, B.K. Satapathy, A. Patnaik, Thermo-mechanical correlations to erosion performance of short carbon fibre reinforced vinyl ester resin composites, Materials & Design, 32 (2011) 2260-2268.
37. A. Das, B.K. Satapathy, Structural, thermal, mechanical and dynamic mechanical properties of cenosphere filled polypropylene composites, Materials & Design, 32 (2011) 1477-1484.
38. B. Satapathy, A. Das, A. Patnaik, Ductile-to-brittle transition in cenosphere-filled polypropylene composites, Journal of Materials Science, 46 (2011) 1963-1974.
39. N. Dayma, B.K. Satapathy, Morphological interpretations and micromechanical properties of polyamide-6/polypropylene-grafted-maleic anhydride/nanoclay ternary nanocomposites, Materials & Design, 31 (2010) 4693-4703.

40. A. Patnaik, M. Kumar, B.K. Satapathy, B.S. Tomar, Performance sensitivity of hybrid phenolic composites in friction braking: Effect of ceramic and aramid fibre combination, Wear, 269 (2010) 891-899.
41. B.K. Satapathy, A. Majumdar, B.S. Tomar, Optimal design of flyash filled composite friction materials using combined Analytical Hierarchy Process and Technique for Order Preference by Similarity to Ideal Solutions approach, Materials & Design, 31 (2010) 1937-1944.
42. N. Dadkar, B.S. Tomar, B.K. Satapathy, A. Patnaik, Performance assessment of hybrid composite friction materials based on flyash–rock fibre combination, Materials & Design, 31 (2010) 723-731.
43. A. Patnaik, M. Abdulla, A. Satapathy, S. Biswas, B.K. Satapathy, A study on a possible correlation between thermal conductivity and wear resistance of particulate filled polymer composites, Materials & Design, 31 (2010) 837-849.
44. M. Ganß, B.K. Satapathy, M. Thunga, R. Weidisch, K. Knoll, Molecular-Weight-Controlled Brittle-to-Semiductile-to-Ductile Transition in S-(S/B)-S Triblock Copolymers, Macromolecular Materials and Engineering, 295 (2010) 178-188.
45. B.K. Satapathy, M. Ganss, P. Poetschke, R. Weidisch, Stress transfer and fracture mechanisms in carbon nanotube-reinforced polymer nanocomposites, Wiley-VCH Verlag GmbH & Co. KGaA, 2010, pp. 139-172.
46. N. Dadkar, B.S. Tomar, B.K. Satapathy, Evaluation of flyash-filled and aramid fibre reinforced hybrid polymer matrix composites (PMC) for friction braking applications, Materials & Design, 30 (2009) 4369-4376.
47. M. Ganß, B.K. Satapathy, M. Thunga, U. Staudinger, R. Weidisch, D. Jehnichen, J. Hempel, M. Rettenmayr, A. Garcia-Marcos, H.H. Goertz, Morphology and mechanical response of S–B star block copolymer – Layered silicate nanocomposites, European Polymer Journal, 45 (2009) 2549-2563.
48. M. Thunga, B.K. Satapathy, R. Weidisch, M. Stamm, J.U. Sommer, K. Knoll, Influence of chain architecture on phase behaviour of styrene-(styrene/butadiene)-styrene triblock copolymers and their binary blends, European Polymer Journal, 45 (2009) 537-549.
49. U. Staudinger, B.K. Satapathy, R. Weidisch, Influence of block composition on crack toughness behaviour of styrene-b–(styrene-random-butadiene)–b-styrene triblock copolymers, European Polymer Journal, 44 (2008) 1822-1833.

50. M. Thunga, B.K. Satapathy, U. Staudinger, R. Weidisch, M. Abdel-Goad, A. Janke, K. Knoll, Dynamic mechanical and rheological properties of binary S–(S/B)–S triblock copolymer blends, Journal of Polymer Science Part B: Polymer Physics, 46 (2008) 329-343.
51. M. Ganß, B.K. Satapathy, M. Thunga, R. Weidisch, P. Pötschke, D. Jehnichen, Structural interpretations of deformation and fracture behavior of polypropylene/multi-walled carbon nanotube composites, Acta Materialia, 56 (2008) 2247-2261.
52. U. Staudinger, B. Satapathy, M. Thunga, R. Lach, R. Weidisch, K. Knoll, Influence of phase miscibility and morphology on crack resistance behaviour and kinetics of crack propagation of nanostructured binary styrene–(styrene/butadiene)–styrene triblock copolymer blends, Acta Materialia, 55 (2007) 5844-5858.
53. M. Ganß, B.K. Satapathy, M. Thunga, R. Weidisch, P. Pötschke, A. Janke, Temperature dependence of creep behavior of PP–MWNT nanocomposites, Macromolecular rapid communications, 28 (2007) 1624-1633.
54. U. Staudinger, B.K. Satapathy, M. Thunga, R. Weidisch, A. Janke, K. Knoll, Enhancement of mechanical properties of triblock copolymers by random copolymer middle blocks, European Polymer Journal, 43 (2007) 2750-2758.
55. D. Kolluri, B. Satapathy, J. Bijwe, A. Ghosh, Analysis of load and temperature dependence of tribo-performance of graphite filled phenolic composites, Materials Science and Engineering: A, 456 (2007) 162-169.
56. B.K. Satapathy, R. Weidisch, P. Pötschke, A. Janke, Tough-to-brittle transition in multiwalled carbon nanotube (MWNT)/polycarbonate nanocomposites, Composites Science and Technology, 67 (2007) 867-879.
57. B.K. Satapathy, M. Ganß, R. Weidisch, P. Pötschke, D. Jehnichen, T. Keller, K.D. Jandt, Ductile-to-Semiductile Transition in PP-MWNT Nanocomposites, Macromolecular rapid communications, 28 (2007) 834-841.
58. R. Weidisch, M. Ganss, B. Satapathy, P. Poetschke, D. Jehnichen, A. Janke, Morphology and crack toughness behaviour of PP-MWNT nanocomposites, Bulletin of the American Physical Society, 52 (2007).
59. B. Satapathy, R. Lach, R. Weidisch, K. Schneider, A. Janke, K. Knoll, Morphology and crack toughness behaviour of nanostructured block copolymer/homopolymer blends, Engineering Fracture Mechanics, 73 (2006) 2399-2412.

60. B.K. Satapathy, U. Staudinger, M. Thunga, R. Lach, R. Weidisch, Influence of Phase Miscibility on the Crack Propagation Kinetics of Nanostructured Binary S-(S/B)-S Triblock Copolymer Blends, Macromolecular rapid communications, 27 (2006) 1814-1820.
61. B.K. Satapathy, J. Bijwe, Composite friction materials based on organic fibres: sensitivity of friction and wear to operating variables, Composites Part A: Applied Science and Manufacturing, 37 (2006) 1557-1567.
62. M. Thunga, U. Staudinger, B. Satapathy, R. Weidisch, M. Abdel-Goad, A. Janke, K. Knoll, Influence of molecular architecture of S–S/B–S triblock copolymers on rheological properties, Journal of Polymer Science Part B: Polymer Physics, 44 (2006) 2776-2788.
63. F. Costa, B. Satapathy, U. Wagenknecht, R. Weidisch, G. Heinrich, Morphology and fracture behaviour of polyethylene/Mg–Al layered double hydroxide (LDH) nanocomposites, European Polymer Journal, 42 (2006) 2140-2152.
64. B. Satapathy, J. Bijwe, N. Majumdar, Influence of modified phenolic resins on the fade and recovery properties of the friction materials: Supportive evidence multiple criteria decision-making method (MCDM), Journal of Reinforced Plastics and Composites, 25 (2006) 1333-1340.
65. B. Satapathy, J. Bijwe, D. Kolluri, Assessment of fiber contribution to friction material performance using grey relational analysis (GRA), Journal of composite materials, 40 (2006) 483-501.
66. B.K. Satapathy, U. Staudinger, R. Weidisch, R. Lach, A. Janke, K. Knoll, Strain field analysis and kinetics of crack propagation of binary triblock copolymer blends, Macromolecular rapid communications, 27 (2006) 266-273.
67. A. Janke, K. Schneider, K. Knoll, R. Weidisch, B. Satapathy, R. Lach, Morphology and crack toughness behaviour of nanostructured block copolymer/homopolymer blends, Engineering Fracture Mechanics, (2006) 2399-2412.
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69. B.K. Satapathy, R. Weidisch, P. Pötschke, A. Janke, Crack toughness behaviour of multiwalled carbon nanotube (MWNT)/polycarbonate nanocomposites, Macromolecular rapid communications, 26 (2005) 1246-1252.

70. B. Satapathy, J. Bijwe, Influence of operating parameters on the performance of friction composites based on combinations of rock fibers and organic fibers, Journal of Reinforced Plastics and Composites, 24 (2005) 579-595.
71. B. Satapathy, J. Bijwe, Fade and recovery behavior of non-asbestos organic (NAO) composite friction materials based on combinations of rock fibers and organic fibers, Journal of Reinforced Plastics and Composites, 24 (2005) 563-577.
72. B. Satapathy, J. Bijwe, Performance of friction materials based on variation in nature of organic fibres: Part II. Optimisation by balancing and ranking using multiple criteria decision model (MCDM), Wear, 257 (2004) 585-589.
73. B. Satapathy, J. Bijwe, Performance of friction materials based on variation in nature of organic fibres: Part I. Fade and recovery behaviour, Wear, 257 (2004) 573-584.
74. J. Bijwe, S. Awtade, B. Satapathy, A. Ghosh, Influence of concentration of aramid fabric on abrasive wear performance of polyethersulfone composites, Tribology Letters, 17 (2004) 187-194.
75. B.K. Satapathy, J. Bijwe, Wear data analysis of friction materials to investigate the simultaneous influence of operating parameters and compositions, Wear, 256 (2004) 797-804.
76. B.K. Satapathy, J. Bijwe, Analysis of simultaneous influence of operating variables on abrasive wear of phenolic composites, Wear, 253 (2002) 787-794.
77. J. Bijwe, J. Indumathi, B.K. Satapathy, A.K. Ghosh, Influence of carbon fabric on fretting wear performance of polyetherimide composite, Journal of Tribology, 124 (2002) 834-839.

[2] List of Conferences/ workshop attended

Papers in refereed conferences held abroad-32

Details of papers in refereed conferences held abroad

1. Sandeep Kumar, Bhabani K. Satapathy, Amar Patnaik, Erosive wear analysis of randomly oriented intimately mixed short-glass/carbon fiber-hybrid composites ,European Symposium on Friction, Wear, Wear Protection and Related Areas 2011, October 26-28, Karlsruhe, Germany.

2. Naresh Dayma, Bhabani K. Satapathy, Morphology and fracture behavior of nanoclay filled impact modified PA-6 ternary nanocomposites Eurofillers 2011, Dresden, Germany, August 21-25, 2011.
3. Martin Ganß, Bhabani K. Satapathy, Mahendra Thunga, Roland Weidisch, Petra Pötschke, Andreas Janke, Dieter Jehnichen, Deformation and fracture behaviour of PP-MWNT nanocomposites, Nanocomposites 2008, Sept 15-17, 2008, San Diego, CF, USA.
4. M.Thunga, B. K. Satapathy, U. Staudinger, R. Weidisch*, K. Knoll, Influence of molecular weight on physical and mechanical properties of linear symmetric S-(S/B)-S triblock copolymers, PPS-24, June 15-19, 2008, Salerno, Italy.
5. B. K. Satapathy*, M. Ganß, R. Weidisch, P. Pötschke, Morphology and crack resistance behaviour of PP-MWNT nanocomposites, Intl. Symposium on Functional Polymer Based Materials (PBM-Symposium), 3-4 April 2007, Friedrich Schiller University, Jena, Germany .
6. M. Thunga, U. Staudinger, B. K. Satapathy, R. Weidisch, M. Stamm, K. Knoll, Rheology and phase behaviour of triblock copolymer blends PBM Symposium, Friedrich- Schiller-University, Jena , Germany, 3-4 April 2007.
7. M. Ganß, B. K. Satapathy, M. Thunga, R. Weidisch, P. Pötschke, A. Janke, D. Jehnichen, Creep Behaviour of PP-MWNT nanocomposites, PBM Symposium, Friedrich- Schiller-University, Jena , Germany, 3-4 April 2007.
8. M. Ganß, B. K. Satapathy, M. Thunga, R. Weidisch, P. Pötschke, D. Jehnichen, A. Janke, Deformations- und Bruchverhalten von PP-MWNT Nanokompositen, 11. Problem- Seminar Deformations- und Bruchverhalten von Kunststoffen, Merseburg, Germany, June-2007.
9. U. Staudinger, B. K. Satapathy, R. Weidisch, R. Lach, K. Knoll, Rissausbreitungsverhalten und Dehnungsfeld Entwicklung in Nanostructurierten S-SB-S-Triblock Copolymer Blends, Thringen Werkstoff Tag Polymere in Thringen, Friedrich Schiller Universitat Jena, Oct-2006, Page: 114-119, Verlag Dr. K  ster, Berlin, ISBN 978-3-89574-606-2.
10. M. Ganß, B. K. Satapathy, R. Weidisch, P. Pötschke,, D. Jehnichen, T. Keller, K. D. Jandt, Untersuchungen zur Rissausbreitung in Multiwalled Carbon nanotube /

Polypropylen Kompositen Thüringen Werkstofftag Polymere in Thüringen, Friedrich Schiller Universitat Jena, Oct-2006, Page: 79-84, Verlag Dr. Kster, Berlin, ISBN 978-3-89574-606-2

11. M. Thunga, U. Staudinger, B. K. Satapathy, R. Weidisch, A. Janke, K. Knoll, Correlation Between Morphology, Rheology and Dynamic Mechanical Properties of Binary Triblock Copolymer Blends Polymerwerkstoffe 2006 (P-2006) from 27 - 29 Sept. 2006 in Halle-Saale, Martin-Luther-Universitat Halle-Wittenberg, Germany.
12. U. Staudinger ,B. K. Satapathy, R. Weidisch, R. Lach, A. Janke, K. Knoll, Crack Propagation behaviour and strain field developement in nanostructuredS-S/B-S-Triblock Copolymer Blends Polymerwerkstoffe 2006 (P-2006) from 27 - 29 Sept. 2006 in Halle-Saale, Martin-Luther-Universitat Halle-Wittenberg, Germany.
13. M. Ganß, U. Staudinger, M. Thunga, B. K. Satapathy, R. Weidisch, R. Lach, A. Janke, K. Knoll, Influence of Processing on the Morphology and Mechanical Properties of Binary S-S/B-S Triblock Copolymer Blends Polymerwerkstoffe 2006 (P-2006) from 27 - 29 Sept. 2006 in Halle-Saale, Martin-Luther-Universitat Halle-Wittenberg, Germany.
14. M. Thunga, U. Staudinger, B. K. Satapathy, R. Weidisch, K. Knoll , Influence of molecular weight on rheological properties of linear symmetric S-(S/B)-S triblock copolymers, Deutsche Physikalische Gesellschaft (DPG) Meeting, European Physical Society, 26-31 March 2006, Dresden, Germany.
15. U. Staudinger ,B. K. Satapathy, R. Weidisch, A. Janke, K. Knoll Architectural influence on deformation and fracture properties of S-S/B-S triblock copolymers Deutsche Physikalische Gesellschaft (DPG) Meeting, European Physical Society, 26-31 March 2006, Dresden, Germany.
16. U. Staudinger, B. K. Satapathy, R. Weidisch, K. Reincke, R. Lach, K. Knoll, Correlation between microhardness evolution and strain field analysis during crack propagation of binary triblock copolymer belnds, 13th Intl. Conference on Deformation, Yield and Fracture of Polymers, 10-13 April 2006, Rolduc Abbey, Kerkrade, The Netherlands.
17. B. K. Satapathy, R. Weidisch*, P. Pötschke, A. Janke, Crack toughness behaviour of multi walled carbon nanotube (MWNT) / polycarbonate nanocomposites, World

Polymer Congress - MACRO 2006, 41st Intl. Symposium on Macromolecules, 16-21st July 2006, Rio de Janeiro, , Brazil.

18. M. Thunga, U. Staudinger, B. K. Satapathy, R. Weidisch*, K. Knoll Influence of molecular weight on rheological properties of linear symmetric S-(S/B)-S triblock copolymers, World Polymer Congress- MACRO 2006, 41st Intl. Symposium on Macromolecules, 16-21st July 2006, Rio de Janeiro, , Brazil.
19. B. K. Satapathy, R. Weidisch, P. Pötschke, A. Janke Tough-to-brittle transition in multiwalled carbon nanotube (MWNT) / polycarbonate nanocomposites International Conference on Carbon Nanotube (CNT)- Polymer Composites, September 4-7, 2005, Technische Universitt Hamburg-Harburg, Germany. (received the poster award).
20. U. Staudinger, B. K. Satapathy, M. Abdel-Goad, R. Weidisch, A. Janke, K. Knoll, Correlation between molecular architecture and fracture behaviour of S-S/S-B triblock copolymers, 10th Problem Seminar on Deformation and Fracture Behaviour of Polymeric Materials,15-17June 2005, IPW, Merseburg, Germany.
21. U. Staudinger, M. Abdel-Goad, B. K. Satapathy, M. Thunga, R. Weidisch, A. Janke, K. Knoll, Influence of molecular architecture of S-S/S-B triblock copolymers on morphology and rheological properties, 21st Annual Meeting of the Polymer Processing Society (PPS-21), 19-23 June, 2005, Leipzig, Germany.
22. B. K. Satapathy, R. Weidisch, P. Pötschke, A. Janke, Crack toughness behaviour of multi walled carbon nanotube (MWNT) / polycarbonate nanocomposites, 8th European Symposium on Polymer Blends and Euro Fillers 2005, 9-12 May, 2005, Bruges, Belgium .
23. U. Staudinger, R. Weidisch, B. K. Satapathy, A. Janke, M. Abdel-Goad, K. Knoll, Influence of molecular architecture on morphology and fracture behaviour of binary triblock copolymers, 1st International symposium on Nanostructured and Functional Polymer Based Materials and Composites (Nanofunpoly 2005), 24-27 April, Dresden, Germany .
24. B. K. Satapathy, R. Weidisch, P. Pötschke , A. Janke, Influence of carbon nanotubes on the crack behaviour of polycarbonate based polymer nanocomposites 1st International symposium on Nanostructured and Functional Polymer Based Materials and Composites (Nanofunpoly 2005), 24-27 April, Dresden, Germany.

25. B. K. Satapathy, U. Staudinger, M.Abdel-Goad, M. Thunga, R. Weidisch*, R. Lach, K. Knoll, Correlation between morphology, rheological properties and fracture behaviour of binary triblock copolymer blends, 21st Annual Meeting of the Polymer Processing Society (PPS-21), 19-23 June, 2005, Leipzig, Germany.
26. B. K. Satapathy, R. Lach. R. Weidisch*, A. Janke and K. Knoll, Morphology and crack toughness behaviour of nanostructured block copolymer/homopolymer blends, 4th Intl. Conf. on Fracture of Polymers, Composites and Adhesives- (4th ESIS TC4), 11-14th Sept 2005. Les Diablerets, Geneva, Switzerland .
27. J.Bijwe*, Nidhi and B. K. Satapathy, Influence of Modified Phenolic Resins on the Fade and Recovery Behaviour of Friction Materials, 15th Intl. Conf. on Wear of Material (WOM), Apr 24-28, 2005, San Diego, USA.
28. R. Weidisch*, U. Staudinger, B. K. Satapathy, R. Lach, W. Grellmann and K. Knoll, Fracture Behaviour of Binary Block Copolymer Blends, 11th Intl. Conf. on Fracture (ICF)-2005,Turin, Italy.
29. U. Staudinger, B. K. Satapathy, R. Weidisch, R. Lach, K. Knoll, Influence of Morphology on Fracture Behaviour of Binary Triblock Copolymer Blends, 6th IPF colloquium on Advanced Heterogeneous Polymer Materials from 18th-19th November 2004, Institute for Polymer Research (IPF), Dresden, Germany.
30. B. K. Satapathy, R. Lach, R. Weidisch, K. Schneider, A. Janke, K. Knoll, Crack Toughness Behaviour of Asymmetric Star Block Copolymer / Homopolymer Blends, 6th IPF colloquium on Advanced Heterogeneous Polymer Materials from 18th-19th November 2004, Institute for Polymer Research (IPF), Dresden, Germany.
31. U. Staudinger, B. K. Satapathy, R. Weidisch, R. Lach, K. Knoll, Morphology and Fracture Behaviour of Binary Triblock Copolymer Blends, Polymerwerkstoffe 2004 (P-2004) from 29 Sept.-1 Oct 2004 in Halle-Saale, Martin-Luther-Universitt Halle-Wittenberg, Germany.
32. B. K. Satapathy, R. Lach, R. Weidisch, K. Schneider, A. Janke, K. Knoll, Micro Structural Interpretation of Fracture Behaviour of Block Copolymer / Homopolymer Blends, Polymerwerkstoffe 2004 (P-2004) from 29 Sept.-1 Oct 2004 in Halle-Saale, Martin-Luther-Universitt Halle-Wittenberg, Germany.

Papers in refereed conferences held in India- 14

Details of papers in refereed conferences held in India

1. D. Das, B. K. Satapathy, Tacticity induced influence on fracture toughness of PP/MWNT Nanocomposites, 4th International Conference on Recent Advance in Composites Materials (ICRACM-2013), International Center, Goa, India, February, 18-21, 2013.
2. D. Das, B. K. Satapathy, Rheological, Morphological and Fracture Toughness Behavior of MWNT Reinforced Stereo-Complex Polypropylene Nano composites, 3rd FAPS Polymer Congress and Macro 2013,Bangalore, India, May 15-18, 2013
3. R. K. Kachhap and B. K. Satapathy,Dynamic Mechanical Response and Tribological Performance of Phenolic Composites: "Combinatorial Effect of Cenosphere and Tungsten disulphide", 3rd FAPS Polymer Congress and Macro 2013,Bangalore, India, May 15-18, 2013.
4. S. Kumar, B. K. Satapathy and S. N. Maiti, Morphological, Rheological and Thermal Properties of Polyamide-612/ Poly(ethylene-octene-elastomer) Blend, 3rd FAPS Polymer Congress and Macro 2013,Bangalore, India, May 15-18, 2013.
5. S. Kumar, B. K. Satapathy and S. N. Maiti, Structural, Mechanical and Dynamic Mechanical Analysis of Polyamide-612/POE-g-MA/Halloysite Nanotubes ternary Nanocomposites, 7th International Conference on Materials for Advanced Technologies (ICMAT 2013), Suntec,Singapore, 2013.
6. Harjeet S. Jaggi, Bhabani K. Satapathy, N. C. Mehra, B. S. Tomar, A. Patnaik, Thermo-mechanical and tribological performance of flyash based glass fibre reinforced hybrid composite friction materials International Conference on Electron Nanoscopy, EMSI, 6-8 July 2011.
7. Sandeep Kumar, Bhabani K. Satapathy and Amar Patnaik. Erosive performance of Kevlar fiber reinforced vinyl ester resin composites. International conference on advancements in polymeric materials (APM-2010) 2010, Feb.20-22, CIPET Bhubaneswar Orissa, India.
8. Sandeep Kumar, Bhabani K. Satapathy and Amar Patnaik, Analysis of Influencing Variables for solid particle erosive wear of aramid fiber reinforced vinyl ester resin

composites, National conference on advances in polymer science and technology (APST-2010) 2010, October 22-24, NIT Hamirpur, Himachal Pradash, India.

9. Naresh Dayma, Bhabani K. Satapathy, Comparative study of PA-6/PP-g-MA/nanoclay and PA-6/LDPE-g-MA/nanoclay composites: Morphology and mechanical properties PSE 2010, Punjab University (Chandigarh)
10. Naresh Dayma, Bhabani K. Satapathy, Nanoclay reinforced composites from PA-6/LDPE-g-MA blends: processing, morphology and mechanical properties APST 2010, NIT Hamirpur.
11. Naresh Dayma, Bhabani K. Satapathy Mechanical and morphological properties of nanoclay filled impact modified polyamide-6 ternary nanocomposites Proceeding of APM-2010 conference, CIPET Bhubaneswar (Orissa)
12. Naresh Dayma, Bhabani K. Satapathy, Morphology of impact modified polyamide-6/nanoclay composites, Proceeding of APA conference-2009, Delhi, December-2009.
13. Naresh Dayma, Bhabani K. Satapathy, Mechanical properties of impact modified PA-6/nanoclay filled nanocomposites, Annual meeting of Polymer Processing Society (PPS-25 Goa), March 2009.
14. B. K. Satapathy, Martin Ganss, Roland Weidisch, A. Marcos, K. Knoll, Morphology and fracture behavior of star block copolymer-monmorillonite nanocomposites Annual meeting of Polymer Processing Society (PPS-25 Goa), March 2009.
15. B. K. Satapathy* and J. Bijwe Performance analysis of asbestos free friction materials based on organic fibres and their combinations with rock fibres, Intl. Workshop on Advances in Asbestos free Friction Composites-I (IWAAFC-I), 5th-6th Jan 2006, ITMMEC, Indian Institute of Technology, Delhi, India.
16. B. K. Satapathy*, M. Ganss, R. Weidisch, P. Pötschke, Structural interpretations of deformation and fracture behaviour of PP-MWNT nanocomposites, Asian Polymer Association (APA) Conference, 2008, New Delhi.
17. J Bijwe*, S Awtade, B K Satapathy and A K Ghosh, Development of Aramid-Polyethersulfone Composites for Enhanced Abrasive Wear Resistance, Advances in Materials and Processes for Industrial Applications. Sept. 2003 Pune, India.

18. B. K. Satapathy, J. Indumathi, J. Bijwe* and A.K. Ghosh, "Role of carbon fibres as solid lubricants and reinforcement in fretting wear of Polyetherimide composite", 12th LAWPSP Symposium, IIT, Mumbai, 400076, India, SOL.02.1-SOL.02.4, 2001.
19. B. K. Satapathy*, J.Bijwe and N. C. Mehra, "Worn surface analysis of Phenolic Composites using SEM", 24th EMSI Conference, Feb.9-11, 2001, Chandigarh, India.

[3] List of invited talk

1. Crack toughness behavior of polymer nanocomposites, First National Conference on Recent Advances in Polymer Nanocomposites, Zakir Hussain College, Department of Physics, University of Delhi, Delhi, January 14-15, 2011.
2. Morphology and fracture behavior of block copolymer-montmorillonite nanocomposites, Polymer Processing Society (PPS-25), Goa, March-2009.
3. Deformation and fracture behavior of PP-MWNT nanocomposites, Asian Polymer Association (APA-2008), New-Delhi, 2008.

[4] List of M.Tech Project Supervised

M.Tech students: 23 (20 completed + 3 ongoing *)

1. Sandip Pal: Studies on Processed Volcanic Rock Fiber Reinforced Polypropylene Composites (Entry No. 2012JPT2462).
2. Rohan More: Studies on Cork Powder filled LDPE/LDPE-g-MA Blends (Entry No. 2012JPT2452)
3. *Jitendra Narayan Panda: Studies on Nano-calcium carbonate filled
4. Soumyajit Basu: Electrical Properties of Graphene/Polymer nanocomposites (Entry No. 2011JPT2752).
5. Nilesh Ramesh Bakare: Impact toughening of polyamides (Entry No. 2011JPT2790
6. Abhishek Kumar Yadav: Evaluation of CNT filled ultra high molecular weight polyethylene biocomposites (Entry No. 2011JPT2775)
7. Vignesh V: Tribological and mechanical properties of filled polyamide nanocomposites (Entry No. 2011JPT2753
8. M. Sathish Kumar: Studies on HIPS based blends and composites (Entry No. 2011JPT2765)

9. Avinash Tiwari: Optimization of performance parameters of cenosphere based friction composites (Entry No. 2010JPT2672)
10. Harshita Nandwani: Mechanical properties of UHMWPE/nanohydroxyapatite composites (Entry No. 2010JPT2679)
11. Ashish Kumar H Danodiya: Mechanical properties and mechanism of barium sulphate filled polypropylene (Entry No. 2010JPT2676)
12. Arun Kumar: Investigations on hybrid needle punched nonwoven reinforced PP composites (Entry No. 2010JPT2674)
13. Larry Phillipose: Evaluation of UHMWPE/HDPE/hydroxyapatite composites (Entry No. 2010JPT2717)
14. Shib Shankar Banerjee: Rheological behaviour of fumed silica filled PDMS suspensions (Entry No. 2010JPT2695)
    a. Nandan Dadkar: Performance evaluation of flyash filled phenolic composites for braking applications (Entry No. 2007JPT2297)
15. P. S. Sahar: Size scale effects of silica on mechanical and dynamic mechanical properties of dental composites (Entry No. 2010JPT2684)
16. Kaustav Goswami: Studies of interpenetrating networks based on PDMS (Entry No. 2009JPT2640)
17. Yogesh Kumar: Fracture and bio-tribological performance evaluation of HDPE-hydroxyapatite composites (Entry No. 2009JPT2657)
18. Harjeet S. Jaggi: Assessment of braking performance of flyash based friction materials (Entry No. 2009JPT2649)
19. Rich Kant: Influence of solid lubricants of friction performance of disc brake pads (Entry No. 2009JPT2653)
20. Pushpendra Shrama: Studies of sulfur mustard and its simulant with doped conducting polymer modified electrode (Entry No. 2008JPT2852)
21. Rajdeep Majumdar: Studies of fibrillation of PTFE-PS blends (Entry No. 2008JPT2850)
22. Arijit Das: Morphology and fracture behaviour of polypropylene-cenosphere composites (Entry No. 2008JPT2849)

23. Nandan Dadkar: Performance evaluation of flyash filled phenolic composites for braking applications (Entry No. 2007JPT2297)

[5] List of Ph.D student supervised :

PhD Thesis supervision details:

PhD students: 8 (4 + 4 x 0.5); (6 Ongoing + 1 completed + 1- Submitted Thesis)

Independent:

1. Dibyendu Das: Fracture kinetics and strain field analysis of carbon nanotube filled polypropylene nanocomposites (Entry No: 2010PTZ8124)
2. Rakesh Kachhap: Load-speed-temperature sensitivity of flyash cenosphere based friction
3. Naresh Dayma: Deformation and fracture behaviour of nanoclay filled impact toughened polyamide-6 (Entry No: 2007PTZ8245) (Degree awarded))
4. Sandeep Kumar: Erosion performance of short fiber reinforced vinyl ester resin composites (Entry No: 2008PTZ8110) (Thesis Submitted)
   composites (Entry No: 2010PTZ8127)

Jointly:

5. Debanga Konwar (0.5): Studies on PLA based copolymers and its nanocomposites (2012 PTZ8199) (with Dr. J. Jacob, CPSE)
6. Harshita Nandwani (0.5): Studies on dental restorative composites (Entry No.- 2012PTZ8194) (with Prof. A.R. Ray, CBME)
7. Harjeet S. Jaggi (0.5): Fracture and fatigue performance of polyethylene based composites for artificial joint replacements (Entry No: 2011PTZ8433) (with Prof. A.R. Ray, CBME)
8. Sunil Kumar(0.5): Investigations on nanofilled toughened polyamides (Entry No: 2009PTZ8603) (with Prof. S. N. Maiti, CPSE)

[6] List of sponsored project details:

Individually (As PI):

1. Title: Development, characterization and evaluation of high-life nano and nanohybrid resin composites for restorative dentistry.

Sponsor: Department of Biotechnology

Amount: Rs. 27.96 lakhs

Duration: 3 years (17-02-09 to 16-02-12)

2. Title: Studies on deformation behaviour of carbon nanotube filled polymer nanocomposites based on crack propagation kinetics and strain field analysis approach,
   Sponsor: Department of Science and Technology
   Amount: Rs. 37.54 lakhs
   Duration: 3 years (15-07-09 to 14-07-12)

With other faculty of CPSE

3. Title: Development, characterization and performance evaluation of flyash filled friction composites for automotive braking applications
   Sponsor: Flyash Unit-Department of Science and Technology
   Amount: Rs. 26.96 lakhs
   Duration: 2 years and 6 months (wef: 08-09-2010)

With another faculty of IITD but from out of CPSE

4. Title: Development of nano-engineered high-life fatigue-proof polymer materials for artificial total joint replacements (TJR),
   Sponsor: Department of Biotechnology
   Amount: Rs. 92.174 lakhs
   Duration: 3 years (wef: 20-09-2010)

[7] List of Industry consultancies (details)

1. Advice on performance properties of aluminium-polymer composite panels, Sponsored by Alstone International, Noida (through IRD).

[8] Technology Developed

NIL

[9] Technology transferred

NIL

[10] Number of patents filed and patents granted

NIL

[11] Innovation of products, process, designs etc.

NIL

[12] Joint thesis guidance by faculty across groups within a department or across department and centres

1. Debanga Konwar (0.5): Studies on PLA based copolymers and its nanocomposites (2012 PTZ8199) (with Dr. J. Jacob, CPSE)
2. Harshita Nandwani (0.5): Studies on dental restorative composites (Entry No.- 2012PTZ8194) (with Prof. A.R. Ray, CBME)
3. Harjeet S. Jaggi (0.5): Fracture and fatigue performance of polyethylene based composites for artificial joint replacements (Entry No: 2011PTZ8433) (with Prof. A.R. Ray, CBME)
4. Sunil Kumar(0.5): Investigations on nanofilled toughened polyamides (Entry No: 2009PTZ8603) (with Prof. S. N. Maiti, CPSE)

[13] Proposed, submitted and funded (PI or Co-PI) and their group/ department

NIL

[14] Workshops/ short term courses conducted/ organized by faculty

NIL

[15] Number of students (PhD/ Masters) directly linked to industry funded projects

NIL

[16] Continuing education/ courses for industry

NIL

[17] Faculty secondment to industry

NIL

[18] Research project undertaken with industry as partner

NIL

[19] Seminars/ workshops held with industry by department

NIL

[20] Service as Board, Senate, Selection Committee member at other IITs, NITs, Universities

NIL

[21] Service as PhD thesis examiner at other institutions

1. Examined PhD thesis entitled "Phase stability of protein solutions, gels, and complex coacervates in ionic liquid solutions" from School of Physical Sciences, Jawaharlal Nehru University. New Delhi.

[22] Service as technical expert on committee; MHRD, DST, DSIR, DRDO, PAN IIT, ministries in state, local or central

1. Technical expert for evaluation of projects submitted to DBT, ICMR and CSIR

[23] Technical expert on Policy, Regulatory, Laws, Standard committees

NIL

[24] Member of Board/ Advisory board of public and private sector corporations

NIL

[25] Positions held by Faculty on lien

NIL

[26] Recognitions and Awards

Awards to Faculty

- Outstanding Young Faculty Fellowship (OYFF) Sponsored by Kusuma Trust at IIT Delhi for 5 years (from October-2008 to September-2013).

Fellow of Academics, INAE etc

NIL

ATTACHMENT-10

CENTRE FOR POLYMER SCIENCE AND ENGINEERING

3rd May, 2013

Subject: Minutes of the PEC meeting held on 3/5/2013

The following members were present:

1.	Prof. Veena Choudhary	Chairman
2.	Prof. S. N. Maiti	Member
3.	Prof. A. K. Ghosh	Member
4.	Prof. Harpal Singh	Member
5.	Prof. Ravi Shankar	Member
6.	Dr. J. Jacob	Member
7.	Dr. B. K. Satapathy	Member

The following members could not attend the meeting:

Prof. Naresh Bhatnagar, Prof. Mangla Joshi and Dr Sanant Mohanty could not attend the meeting.

The following decisions were made:

1. The minutes of the PEC meeting held on 28/2/2013 were approved without modification.

2. Short listing criteria for admission to M.Tech programme in Polymer Science and Technology for the year 2013-14 was approved as follows:

The criteria used for short-listing are summarized below:

I. For candidates with background in Chemistry, Polymer and Rubber Technology, Plastic Technology, Textile and Fibre science, Textile and Jute Technology

General Category students: GATE score of 350 or higher and 60% aggregate or 6.75 CGPA on a 10 point scale at BTech/MTech level.

OBC students: GATE score of 315or higher and 60% aggregate or 6.75 CGPA on a 10 point scale at BTech/MTech level.

SC/ST/PH students: GATE score of 235 or higher and 55% aggregate or 6.25 CGPA on a 10 point scale at BTech/MSc level.

II. For candidates with Chemical Engineering and Petrochemical Engineering background, the criteria are as follows:

General Category students: GATE score of 400 or higher and 60% aggregate or 6.75 CGPA on a 10 point scale at BTech/MTech level.

OBC students: GATE score of 360 or higher and 60% aggregate or 6.75 CGPA on a 10 point scale at BTech/MTech level.

SC/ST/PH students: GATE score of 266 or higher and 55% aggregate or 6.25 CGPA on a 10 point scale at BTech/MSc level.

III. For candidates with Mechanical Engineering background, the short-listing criteria are as follows:

General Category students: GATE score of 590 or higher and 60% aggregate or 6.75 CGPA on a 10 point scale at B.Tech/ M.Tech level.

OBC students: GATE score of 530 or higher and 60% aggregate or 6.75 CGPA on a 10 point scale at B. Tech/ M. Tech level.

SC/ST/PH students: GATE score of 390 or higher and 55% aggregate or 6.25 CGPA on a 10 point scale at B. Tech/ M. Sc level.

Interviews will be held on 21st/22nd May, 2013 in the committee room of CPSE.

3. M. Tech Viva-voce exam: PEC discussed about the M. Tech viva voce examination date and the list of examiners. Dates proposed are between 24- 28th May, 2013 as per the availability of examiners.

The meeting ended with a vote of thanks to the Chair.

3/5/13

Veena Choudhary

CENTRE FOR POLYMER SCIENCE AND ENGINEERING

21st November, 2013

Subject: Minutes of the CRC meeting held on 20.11.2013

The following members were present:

1.	Prof. S. N. Maiti	Chairman
2.	Prof. A. K. Ghosh	Member
3.	Prof. Manjeet Jassal	Member
4.	Dr. B. K. Satapathy	Member
5.	Dr. J. Jacob	Convenor

Prof. Veena Choudhary and Prof. Harpal Singh could not attend the meeting.

The following decisions were made:

1. The minutes of the CRC meeting held on 01.10.2013were approved without modification.
2. CRC discussed and finalized the list of internal and external thesis examiners for Ms. Rajul Sharma (2008PTZ8103).
3. CRC discussed and finalized the short-listing criteria for admission of PhD candidates for first semester 2012-2013 as follows:

Short-listing criteria for admission to PhD program

For General/OBC category candidates

i) 65% marks in aggregate or a CGPA of 7.25 on a 10.00 point scale in MSc in relevant areas with either a GATE score of 450 and above or CSIR/UGC NET

ii) MTech in relevant areas with a minimum of 70% marks in aggregate or a CGPA of 7.75 on a 10.00 point scale.

iii) BTech in relevant area with 75% marks or a CGPA of 8.0 with a GATE score of 450 or above

iv) For all applicants, the grades for the latest qualifying degree will be considered. For all applicants in the final semester of their qualifying degree, their performance till the preceding semester (preceding year if their programmes are year based) will be considered.

For SC/ST/PH category candidates

i) 60% marks in aggregate or a CGPA of 6.75 on a 10.00 point scale in MSc in relevant areas with either a GATE score of 300 and above or CSIR/UGC NET

ii) MTech in relevant areas with a minimum of 65% marks in aggregate or a CGPA of 7.25 on a 10.00 point scale.

iii) BTech in relevant area with 70% marks in aggregate or a CGPA of 7.50 on a 10 point scale with a GATE score of 300 or above

iv) For all applicants, the grades for the latest qualifying degree will be considered. For all applicants in the final semester of their qualifying degree, their performance till the preceding semester (preceding year if their programmes are year based) will be considered.

For Sponsored Candidates

For part time/sponsored candidates admission will be as per Institute rules.

The interview date for PhD admission has been fixed for Monday, 16th December, 2013 from 09:30 am onwards in the Committee Room of the Centre for Polymer Science and Engineering.

4. CRC discussed and approved Prof. A. K. Ghosh and Dr. Sudip Pattanayek as joint supervisors for a PhD student, Swarna (2012PTZ8349) and her SRC was reconstituted as follows:

Name of Student	SRC members
Swarna (2012PTZ8349)	Prof. S. N. Maiti (Chairman) Dr. B. K. Satapathy (Internal Expert) Prof. Ashwini Agarwal (External Expert) Dr. Sudip K. Pattanayek (Supervisor) Prof. A. K. Ghosh (Supervisor)

5. CRC discussed and forwarded the application of Ms. Priyanka Singh (2008PTZ8385) seeking extension of Institute fellowship by six months.

6. CRC considered the application of Mr. Rishi Sharma (2010PTZ8680) for conversion of registration from full-time to part-time and forwarded the same. CRC also discussed his application seeking extension of research assistantship and recommended joining IRD project CW08111 under Prof. A. K. Ghosh.

7. CRC discussed and decided to hold the re-comprehensive exam for PhD students in the last week of December, 2013.

The meeting ended with a vote of thanks to the Chair.

Dr. J. Jacob
Convenor, CRC

Prof. S. N. Maiti
Chairman, CRC