



ICRRM-2008

**FINAL TECHNICAL PROGRAMME OF THE
INTERNATIONAL CONFERENCE
ON
RUBBER & RUBBER-LIKE MATERIALS**

JANUARY 8 – 10, 2008

ORGANISED BY

**RUBBER TECHNOLOGY CENTRE
INDIAN INSTITUTE OF TECHNOLOGY
KHARAGPUR**

REGISTRATION

Venue : Vikramshila Complex (Foyer)

Date : 07-01-2008 (Monday)

Time : 1700 – 2000 h

Date : 08 – 01 – 2008 (Tuesday)

Time : 0800 Onwards

TUESDAY, JANUARY 08, 2008

INAUGURAL PROGRAMME

10.00 – 11.00

Inauguration at Kalidas Auditorium (Vikramshila Complex)

Chief Guest : Dr. R.P. Singhania, Vice Chairman & Managing Director, JK Industries Limited, New Delhi

Chief Patron : Prof. D. Acharya, Director, Indian Institute of Technology, Kharagpur

11.00 – 11.30

High Tea at Vikramshila Complex (Foyer)

INVITED LECTURES

Kalidas Auditorium : Chairpersons (1) Prof. J.W.M. Noordermeer, The Netherlands
(2) Prof. S.N. Bhattacharyya, Australia

11.30 – 12.00 Prof. S.K. De, India
“An approach to nanocomposites through rubber-filler bonding at the filler-filler network”.

12.00 – 12.30 Dr. S. Kulkarni, India
“Opportunities in engineering thermoplastics”.

12.30 – 13.00 Prof. Jim White, UK
“Dynamic FTIR monitoring of CO₂ generated during UV exposure of thermoplastics and rubbers”.

13.00 – 13.30 Dr. R. Mukhopadhyay, India
“Convergence of technology for rapid development in rubber industries”.

13.30 – 14.30 Lunch at Vikramshila Complex (Foyer)
Hosted by : DSM, Elastomers, The Netherlands.

Kalidas Auditorium : Chairpersons (1) Prof. Gon Seo, South Korea
(2) Dr. Joerg Guntrum, Germany

14.30 – 15.00 Prof. J.W.M. Noordermeer, The Netherlands
“The mechanism of adhesion between tyre cords and rubber, as governed by interfacial phenomenon”.

15.00 – 15.30 Dr. Susmita Bhattacharjee, The Netherlands
“DSM elastomers and Keltan innovation”.

15.30 – 15.45 Tea
Hosted by : GE Global Research, Bangalore

Tuesday
January 08,
2008

Tuesday
January 08,
2008

ORAL PAPER PRESENTATION

	Kalidas Auditorium A) Modified Rubbers/New Polymeric Materials/Nanocomposites/Space application materials (A - 01 - 08)	Gargi Seminar Hall B) Novel Compounding Ingredients (B - 01 - 08)	Maitrayee Seminar Hall C) Rubber Products / Blends and Composites/Thermoplastic Elastomers (C - 01 - 08)
	Chairpersons 1) Prof. Krisda Suchiva, Thailand 2) Mr. U.Paul, India	1) Mr. D.J. Bharucha, India 2) Dr. S.K. Chakraborty, India	1) Mr. P.K. Mohammed, India 2) Mr. B. Dutta, India
Tuesday January 08, 2008	15.45 - 16.00 <u>Amit Das</u> , Rene Jurk, Klaus Werner Stockelhuber, Thomas Engelhardt, Juliance Fritzsche, Manfred Kluppel and Gert Heinrich <i>"Rubber reinforcement by layered silicate : Role of curing packages and processing type on the final microstructures of the nanocomposites"</i> .	Anubhav Saxena <i>"Filler dispersion in silicone rubber"</i> .	Herman Dikland, Michel Dees, Martin van Duin, Susmita Bhattacharjee <i>"Novel EPDM products for peroxide cure applications"</i> .
	16.00 - 16.15 <u>S. Bhowmik</u> , R. Benedictus, C.G. Kim <i>"Space radiation at geosynchronous earth orbit and scope of space durable polymeric nanocomposite"</i> .	S. Chattopadhyay, <u>A. Guha</u> , D. Banerjee, D. Khastgir <i>"Reduction of de-hydrohalogenation during processing of halogen containing fire resistant rubber compound"</i> .	Mr. M.P. Prashant, D.K. Tripathy, <u>S.K.P Amarnath</u> <i>"Modeling of tyre friction using finite element analysis"</i> .
	16.15 - 16.30 <u>Sandip Bhattacharya</u> , Syed Mushtaq, Sritama Kar, B. Dutta, Anil K. Bhowmick <i>"Structure- property relationship in chlorosulphonated polyethylene with special reference to acid resistance"</i> .	S.Patra, P. Singh, S. De, <u>P.K. Pal</u> , A. Dutta <i>"Selection of polybutadiene rubber (PBR) for high performance RIB tyre tread compounding in current scenario"</i> .	<u>Marco Bronzoni</u> <i>"Testing TPEs and rubbers under process conditions: The advantages of capillary rheometers"</i> .
	16.30 - 16.45 <u>Suchismita Sahoo</u> , Pawan K. Bokaria, Anil K. Bhowmick <i>"Preparation and properties of chlorine free contact adhesive"</i> .	<u>K. Dinesh Kumar</u> , Sanjiv Gupta, B. B. Sharma, Andy H. Tsou , Anil K. Bhowmick <i>"Probing the viscoelastic properties of brominated isobutylene-co-p-methylstyrene (BIMS) rubber/tackifier blends through rubber process analyzer (RPA)"</i>	<u>P.V.Reddy</u> , N.Vasudev, D.Khastgir <i>"Development of polymeric blends for high voltage outdoor applications"</i> .
	16.45 - 17.00 <u>Baisali Gupta</u> , Deepanjan Banerjee, Abhijit Bandopadhyay <i>"In-situ modification of high crystallinity grade poly(ethylene-co-octene) elastomer with poly(ethylene-co-acrylic acid) in melt"</i> .	<u>Abdullah</u> , Syed Amanulla. B. Kothandaraman <i>"Effective utilization of fly ash in flexible PVC formulation"</i> .	<u>Sarat Ghosh</u> , Jyotiprakash Rath, SKP Amarnath , P.K.Mohamed <i>"Importance of material parameter identification & material modeling in tire simulation"</i> .
17.00 - 17.15 <u>S. Satrusallya</u> , S.K. Samal, S.K. Nayak, S.N. Yadava <i>"Effect of clay intercalation on the thermomechanical behaviour of epoxy organoclay nanocomposite"</i> .	<u>Madhuri Nanda</u> , D.K. Tripathy <i>"Physico mechanical and bound rubber properties of conductive carbon black reinforced chlorosulphonated polyethylene vulcanizates"</i> .	<u>Pinka Chakraborty</u> , Anirban Ganguly, Suman Mitra, Anil K. Bhowmick <i>"Influence of different liquid additives on properties and morphology of thermoplastic elastomers prepared from phase modified EPDM rubber and Isotactic polypropylene blends"</i> .	

**Tuesday
January 08,
2008**

17.15 - 17.30

A.H. Bhat, A.K. Banthia
"Poly(hydroxyl ether of bisphenol A) based
modified red mud nanocomposite materials".

M. Thirumal, Nikhil K Singha, Dipak Khastgir, B.S.
Manjunath, Y.P. Naik
"Preparation of rigid polyurethane foam : Effect of
blowing agents and isocyanate index".

Utpal Basuli, T K Chaki and K Naskar
"Mechanical properties of thermoplastic
elastomer on silicone rubber and engage
copolymer by dynamic vulcanization".

17.30 - 17.45

A. Chatterjee, Sushant K. Samal, Sanjay K.
Nayak, Smita Mohanty
"Enhancement of properties of poly-propylene
(PP)/-polyoxymethylene(POM) clay
nanocomposites".

K. Mariamma George, Rosamma Alex, Susamma
Joseph, K.T. Thomas
"Deproteinization and easy coagulation of skim latex".

Bireswar Banerjee
"Pursuit of organizational excellence through
TQM"

Tuesday
January 08,
2008

17.45 - 1800

Discussion

Discussion

Discussion

19.00 – 20.30

Cultural Programme at **Netaji auditorium** by
i) **Prof. & Ms. S. Bhattacharyya, Australia**
ii) **Dance Programs by Sahana Group, Kolkata**

20.30 onwards

Banquet Dinner at **Vikramshila Complex (Foyer)**
Hosted by the Organizing Committee

WEDNESDAY, JANUARY 09, 2008

INVITED LECTURES

Kalidas Auditorium : Chairpersons (1) Prof. S. K. De, India
(2) Prof. J.R. White, U.K.

Wednesday
January 09,
2008

- 09.00 – 09.30** Prof. A. Nandi, India
"Gel nanocomposites".
- 09.30 – 10.00** Prof. S.N. Bhattacharya, Australia
"Review of recent developments in rheological measurements of rubber and rubber nanocomposites".
- 10.00 – 10.30** Dr. S. Sabharwal, India
"Radiation processing of polymer composites: Recent developments and new applications".
- 10.30 – 11.00** Prof. G. Seo, South Korea
"Networked silica with exceptional reinforcing performance for SBR rubber compounds".

11.00 – 11.20 Tea

ORAL PAPER PRESENTATION

Wednesday
January 09,
2008

	Kalidas Auditorium A) Modified Rubbers/New Polymeric Materials/Nanocomposites/Space application materials (A - 09 - 16)	Gargi Seminar Hall E) Electron Beam and other Processing Techniques (E - 01 - 08)	Maitrayee Seminar Hall C) Rubber Products / Blends, Composites/Thermoplastic Elastomers (C - 09 - 16)
Chairpersons	1. Dr. N. Vasudev, India 2. Dr. A.R. Bandopadhyay, India	1. Dr. S. Sabharwal, India 2. Dr. V.K. Tikku, India	1. Prof. Sabu Thomas, India 2. Prof. S.K. Srivastava, India
11.20 – 11.35	<u>Thomas Kurian</u> , Thommachan Xavier <i>"Reprocessable zinc sulfonated ionomers based on natural rubber"</i>	<u>Aswini Kumar</u> , P.K.Das, K.S.S.Sharma, S.Sabarwal, N.Ganesh, S.K.Chakraborty <i>"Electron beam radiation curing for thick rubber products especially tyre"</i> .	<u>Bijan Kumar Roy</u> , Tapas Mandal, Arup Kumar Chandra <i>"Improvement of steel cord rubber adhesion using natural alkyl resorcinol in place of synthetic resorcinol"</i> .
11.35 – 11.50	<u>Sambhu Bhadra</u> , Nikhil K. Singha, Dipak Khastgir <i>"Function of polyaniline as anticorrosive and anti-molding agent"</i> .	P. Chhabra, G. Suri, M. Tyagi, S.Kaushik, G.S. Jha, G. Seshadri, A. Malik, R.K. Khandal <i>"Radiation processing for development of optical plastics"</i> .	<u>Rosamma Alex</u> , N.M. Claramma, K.T. Thomas <i>"Plasticity and cure behaviour of skim rubber obtained by a creaming process"</i> .
11.50 – 12.05	<u>Pradip K. Maji</u> , Prasanta K. Guchhait, Anil K. Bhowmick <i>"Morphology, structure and properties of polyurethane/layered silicate nanocomposites"</i> .	<u>Sridam Bhaumik</u> <i>"Chemical versus electron beam cross-linking of thinwalled flexible elastomeric cables"</i> .	<u>Gautam Sarkhel</u> , Amarnath Banerjee <i>"High density polyethylene-ethylene propylene rubber blends : mechanical modeling, thermal and morphological study"</i> .
1205 – 12.20	<u>Shilpi Sharma</u> , S.K. Samal, S.K. Nayak, S. Mohanty <i>"Linear low density polyethylene/starch blend"</i>	<u>K. Fatma</u> , S. Sabharwal, R.K. Khandal <i>"Electron beam curing epoxy based"</i>	<u>Subhra Mohanty</u> , Rabin Santra <i>"Preparation and use of a next generation vinyl"</i>

nanocomposites :Effects of organoclay on the mechanical properties & morphological behaviour”.

composites for high performance pyridiene latex”. applications”.

12.20 – 12.35

P.K. Guchhait, P.K. Maji, Anil K. Bhowmick
“Nanocomposites of polyester polurethanes : Effect of organically modified montmorillnite (OMMT) on morphology, mechanical & barrier properties”.

Nilambar Mongal, Rupa Bhattacharyya, Debabrata Chakrabarty, Tapan Kumar Chaki
“Effect of electron beam over ethylene-methyl acrylate copolymer”

Debasish Das, Rajiv Munshi
“Finishing of cotton by polyacrylic rubber in presence of NaH₂PO₄ as catalyst under thermal treatment”.

12.35 – 12.50

Sibdas Singha Mahapatra , Niranjan Karak
“Hyperbranched polyamines :Promising materials”.

K.A. Dubey, Y.K. Bhardwaj, C.V. Chaudhari, V. Kumar, N.K. Goel, S. Sabharwal
“Radiation processing of chloroprene and ethylene propylene diene monomer rubber blends”.

Swapnil S. Soni , Sujit K. Dutta
“Elastomer in fender technology”.

12.50 – 13.05

T.Kuila, S.K.Srivastava, A.K. Bhowmick
“Synthesis and characterization of ethylene vinyl acetate copolymer/layered double hydroxide nanocomposites”.

R. S. Haldar, Nilay Pramanik , R. K. Khandal, Y. K. Bhardwaj, and S. Sabharwal
“Radiation processing of Nylon 6 by E-Beam for improved properties and performance”.

S. Hui, S. Chattopadhyay, T.K. Chaki
“Thermoplastic elastomer with nano filler”

13.05 – 13.20

Mithun Bhattacharya, Madhuchhanda Maiti, Anil K. Bhowmick
“Effect of different nanofillers in styrene butadiene rubber”.

Ganesh C Basak, Abhijit Bandopadhyay, Y.K. Bharadwaj, S. Sabharwal & Anil K. Bhowmick
“Electron beam modification of EPDM vulcanizate surface and studies on its adhesion behavior with NR”.

Sandeep Tembhekar, Madhuchhanda Maiti, Jinu Jacob George, Anjan Biswas, Anil K. Bhowmick, Madhumita Saroop, Amit Biswas
“Thermoplastic elastomer from polypropylene / elastomeric acrylate blends”.

13.20 – 13.35

Discussion

Discussion

Discussion

13.35 – 14.30

Lunch at Vikramshila Complex (Foyer)

Hosted By 1) Council of Scientific & Industrial Research (CSIR) 2) Indian Space Research Organisation (ISRO).

INVITED LECTURES

Kalidas Auditorium :

Chairpersons 1. Dr. Macro Bronzoni, Italy
2. Prof. Rani Joseph, India

14.30 – 15.00

Dr. Robert Strehle, Singapore
“Load and extension measurements and modern equipment for rubber testing”.

15.00 – 15.30

Dr. Joerg Guntrum, Germany
“New materials for enhanced performance and processing of silica filled tyre compounds”.

15.30 – 16.00

Dr. P.S. Jain, India
“New technique hyper DSC in polymers”.

16.00 – 16.15

Tea

Hosted by : Chemin Enterprises, Kolkata

Wednesday
January 09,
2008

Wednesday
January 09,
2008

WEDNESDAY, JANUARY 09, 2008

	Kalidas Auditorium A) Modified Rubbers/New Polymeric Materials/Nanocomposites/Space application materials (A - 17 - 22)	Gargi Seminar Hall E) Electron Beam and other Processing Techniques (E - 09 - 14)	Maitrayee Seminar Hall D) Characterization & Testing Equipments (D - 01 - 06)
Chairpersons	1. Dr. Susmita Bhattacharjee, The Netherlands 2. Prof. Siddartha Das, India	1. Prof. S. Bandopadhyay, Australia 2. Dr. R.S. Haldar, India	1. Prof. Mrs. P.P. De, India 2. Dr. Arup Chandra, India
Wednesday January 09, 2008	16.15 – 16.30 <u>P.L.Nayak</u> <i>"Green nanocomposites: current status and future prospects"</i> .	<u>Meenu Kapoor</u> , A.K. Tyagi, Y.K. Bhardwaj, S. Sabharwal, R.K. Khandel <i>"Electron beam curable coatings – an environmental friendly coating for wooden surfaces"</i> .	<u>Bernd Jakob</u> , Jint Nijma, Cornelia Kuchenmeister <i>"A new hybrid temperature control chamber for semi-solids and polymer melts"</i> .
Wednesday January 09, 2008	16.30 – 16.45 <u>Sarojini Swain</u> , S.K. Samal, S.K. Nayak, S. Mohanty <i>"Degradable thermoplastic starch(tps/low density polyethylene (LDPE) nanocomposite film : a sustainable alternative to pure polyethylene"</i> .	<u>Prakash Mugali</u> , Nazim Pasha, Krupa Shankara <i>"Hybrid microwave systems for curing rubber profiles"</i> .	<u>Y.P. Naik</u> , J.V. Dehradraya, B.S. Manjunath, R.G. Agarwal, Ziley Singh, B.K. Sen, V. Venugopal. <i>"Thermal performance & life-time prediction of polyurethanes based foams"</i> .
Wednesday January 09, 2008	16.45 – 17.00 <u>Jinu Jacob George</u> , Anil K. Bhowmick <i>"Carbon nanofibres as reinforcing agent for ethylene vinyl acetate elastomer"</i> .	S. Kalaivani, <u>V. Vijayabaskar</u> , M. Thunga, M. Stephan, H. Dorschner, G. Heinrich, A.K. Bhowmick, U. Wagenknecht. <i>"Effect of irradiation temperatures on nitrile rubber nano composites"</i> .	<u>Mousumi De Sarkar</u> , Gautam Chatterjee <i>"Use of elastomers as impact modifiers in engineering thermoplastics"</i>
Wednesday January 09, 2008	17.00 – 17.15 <u>Anirban Ganguly</u> , Anil K. Bhowmick <i>"Structure-property relationship of sulphonated poly (styrene-b-ethylene-co-butylene-b-styrene) – Clay nanocomposites – with reference to applications"</i> .	<u>Suman Mitra</u> , Santanu Chattopadhyay, Y.K. Bharadwaj, S. Sabharwal, Anil K. Bhowmick <i>"Effect of electron beam crosslinked gel on rheological properties of natural rubber"</i> .	<u>G.K. Kannan</u> , Upendra Simha, Leeladhar Gaikwad, Nirmala. L., N.S. Kumar <i>"Environmental exposures study of bromo butyl rubber used in personal protective equipments"</i> .
Wednesday January 09, 2008	17.15 – 17.30 <u>L. Nayak</u> , S.K. Samal, S. Mohanty, S.K. Nayak <i>"Morphological analysis and thermo gravimetric evaluation of polycarbonate(PC)/acrylonitrile-butadiene-styrene(ABS) blend nanocomposites"</i> .	<u>Sanjoy Datta</u> , Nikhil K. Singha, Kinsuk Naskar, Y.K. Bhardwaj, Sunil Sabarwal <i>"Influence of electron beam irradiation on mechanical properties of styrene-butadiene-styrene block copolymer"</i> .	<u>Samik Gupta</u> , Parnasree Maiti, Kumar Krishnamoorthy, Raja Krishnamurthy, Ashok Menon, Anil K Bhowmick <i>"Effect of silica phase incorporation on reinforcement of poly(phenylene ether) based thermoplastic elastomer"</i> .
Wednesday January 09, 2008	17.30 – 17.45 <u>Kuldip Upadhye</u> , Sushanta K. Samal, Smita Mohanty, Sanjay K. Nayak <i>"Mechanical properties and morphology of PBT/ABS/clay nanocomposites"</i> .	<u>Ponnada Sri Markandeya Rajesh</u> , J. Srinath <i>"Effect of curing cycle on porosity and flexural properties of epoxy matrices reinforced with acid-functionalised CNTs"</i> .	<u>Arnaud Favier</u> <i>"An innovative new range of dynamic mechanical analyzers gathering multiple capabilities of analysis"</i> .
17.45 - 1800 19.00 – 20.30	Discussion	Discussion	Discussion
	Cultural Programme at Netaji auditorium 1. Song by Prof. S. Bandopadhyay, Australia 2. Dance by Dancer's Forum, IIT Campus, Kharagpur		
20.30 onwards	Gala Dinner Hosted By i) All India Rubber Industries Association (AIRIA) ii) TWC Group, Kolkata		

THURSDAY, JANUARY 10, 2008

INVITED LECTURES

Kalidas Auditorium : Chairpersons (1) Prof. D.K. Tripathy, India
(2) Dr. A. Guha, India

Thursday
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09.00 – 09.30 Prof. Sabu Thomas, India
“Investigation of polymer blend miscibility by fluorescence spectroscopy”.

09.30 – 10.00 Dr. A.R. Bandopadhyay, India
“Degradation and protection by using additives”.

10.00 – 10.30 Prof. Rani Joseph, India
“Preparation and use of nano zinc oxide in natural rubber and neoprene rubber”.

10.30 – 11.00 Dr. V.K. Tikku, India
“ EB irradiation crosslinking in rubber and its applications”.

11.00 – 11.20 Tea

ORAL PAPER PRESENTATION

	Kalidas Auditorium	Gargi Seminar Hall	Maitrayee Seminar Hall
	A) Modified Rubbers/New Polymeric Materials/Nanocomposites/Space application materials (A – 23 - 29)	R) Recycling Waste Products/Biodegradable product. (R - 01 - 07)	D) Characterization (D - 07 - 13)
Chairpersons	1. Dr. K.T. Thomas, India 2. Dr. Anubhav Saxena India	1. Dr. Bernd Jakob, Germany 2. Dr. D.K. Setua, India	1. Prof. G.B. Nando, India 2. Dr. P.K. Pal, India
11.20 – 11.35	<u>Francis Reny Costa</u> , Udo Wagenknecht, Gert Heinrich <i>Layered double hydroxides as versatile materials for the synthesis of multifunctional nanohybrids.</i>	<u>Ashoke K Karmokar</u> , Kinya Suzuki <i>“Recycling of scrap tires for civil engineering applications”.</i>	<u>Vineeta Nigam</u> , G Lal, D K Setua <i>“An atomic force microscope study on surfaces of rubber toughened epoxy resin”</i>
11.35 – 11.50	<u>Haimanti Datta</u> , Anil K. Bhowmick, Nikhil K. Singha <i>“Atom transfer radical polymerization (ATRP) of acrylates”.</i>	<u>D.J. Desai</u> , R.N. Desai, A.A. Shaikh <i>“Emerging applications of used tires in civil engineering”.</i>	<u>Kajari Chatterjee</u> , Kinsuk Naskar <i>“A study on aramid short fibre and nanosilica reinforced thermoplastic vulcanizates”.</i>
11.50 – 12.05	<u>R. Giri</u> , S.K. Samal, S. Mohanty, S.K. Nayak <i>“Poly(trimethylene terphthalate) (PPT)/polystyrene (PS)/organoclay blend nanocomposite : Preparation and characterization”.</i>	<u>K.S. Malladi</u> , S.K. Barai <i>“Experiment studies on crumb rubber based concrete”.</i>	<u>Ajeet Singh</u> , Deepak Bartwal, P.L. Sah, M.G.H. Zaidi <i>“Fabrication & mechanical testing of fly ash – epoxy composite”.</i>
1205 – 12.20	<u>Anjan Biswas</u> , Abhijit Bandyopadhyay, Nikhil K. Singha, Anil K. Bhowmick	<u>Jobin Jose</u> , A. Nag , G B Nando <i>“Studies on waste polypropylene</i>	<u>R. Rajesh Babu</u> , Nikhil K Singha, Kinsuk Naskar <i>“Thermoplastic elastomer based on polypropylene</i>

Thursday
January 10,
2008

Thursday
January 10,
2008

"Preparation & properties sulfonated metallocene based polyolefinic elastomers".

(WPP)/acrylonitrile butadiene rubber blends".

and ethylene-octene copolymer by dynamic vulcanization : Effect of various peroxides as cross-linking agent".

12.20 – 12.35

A.K. Barick, S.K. Samal, S. Mohanty, S.K. Nayak

"Biodegradable and functionally superior polypropylene thermoplastic starch nanocomposites from melt blending".

Anjali Pal

"Adsorption of anionic surfactant on waste tire rubber granules".

Anil Kumar P.V., Sabu Thomas & K.T. Varughese
"Dynamic mechanical properties of thermoplastic elastomers from blends of polyethylene with ethylene propylene diene terpolymer rubber".

12.35 – 12.50

Vivek, Sushanta K. Samal, Sanjay K. Nayak, Smita Mohanty

"Thermal dynamic mechanical properties of poly(trimethylene terephthalate) / poly(ethylene terephthalate) blend clay nanocomposites".

M. Rahaman, S.K. Samal, S. Mohanty, S.K. Nayak

"Fabrication and characterization of biodegradable and compatible ethylene vinyl acetate (EVA)/ thermoplastic starch (TPS) blend nanocomposites".

D. Behera, A.K. Banthia

"Kinetics study of epoxidized soybean oil acrylate (ESOA) by thermogravimetric analysis".

12.50 – 13.05

Prativa K. Nanda, A. Sasmal, D. Sahoo, P.L. Nayak

"Biobased nanocomposites from polycaprolactone (PCL)/soy protein isolate (SPI) blend".

R.K. Mishra, M. Datt, A.K. Banthia

"Preparation & characterization of pectin/PVP blend".

Mrinal Kanti Bain, Arpita Kar, Shanti Nath Ghosh, Dipankar Chattopadhyay
"Effect of polyethylene glycol (PEG) and di-sodium tartrate 2-hydrate on thermoreversible sol-gel transition temperature of methyl cellulose".

13.05 – 13.20

Discussion

Discussion

Discussion

13.30 – 14.30

Lunch at Vikramshila Complex (Foyer)
Hosted by Department of Atomic Energy (DAE), Mumbai

Kalidas Auditorium : Chairpersons (1) Prof. A.K. Banthia, India
(2) Dr. R. Mukhopadhyay, India

14.30 – 15.00

Prof. Krishda Suchiva, Thailand

"Structural elucidation of natural rubber by rheological measurement".

15.00 – 15.30

Dr. Steve Rimmer, U.K.

"Synthesis and biological properties of amphiphilic networks for tissue engineering".

15.30 – 16.00

Prof. S. Bandopadhyay, Australia

"Nanocomposite materials in engineering, electronics, photonics and energy".

16.00 – 16.15

Tea Break

16.15 – 17.00

Valedictory Function (Kalidas Auditorium)

1700

High Tea – Hosted by Department of Science & Technology, New Delhi

19.00 – 20.30

Alumni Programme (Kalidas Auditorium)

20.30 (onwards)

Dinner (Vikramshila Foyer)