

14

th International Seminar  
on Polymer Science and Technology



## Word of Welcome

**Dear Participant,**

**It is our great pleasure and honor to host all of you at the 14th international seminar on polymer science and technology (ISPST 2020) on November 11 and 12, 2020. Due to Covid-19 virus pandemy, this year's seminar will be held electronically as a webinar. However, webinar provided the opportunity of having several international participants and keynote speakers. In addition to more than 350 oral/poster presenters and invited speakers, this year we have increased the number of keynote speakers to 33 from 10 different countries. We hope this webinar provides a room for the exchange of knowledge among the academics and industrialists working on polymer science and technology all over the world.**

*Mehdi Razzaghi Kashani*

**Dr. M. Razzaghi-Kashani**  
**ISPST 2020 President**

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**Dear Colleagues,**

**Iranian Polymer Society invites all the participants from all over the world to attend "14<sup>th</sup> International Seminar on Polymer Science and Technology" during 11,12 November 2020 in Tehran, at Tarbiat Modares University. This international gathering is primarily devoted to Application of Polymers in Management of Natural Disasters and includes Keynote presentations, Orals and interactive discussions, Poster presentations and Exhibitions on both scientific and social aspects of vast polymeric research activities. This long standing and biggest event on polymer science and technology in Iran seeks to achieve the best collection of expertise from academia and industry throughout Iran and other countries.**

**My colleagues and I would like to acknowledge and extend our gratitude to the hard working staff and students at Faculty of Chemical Engineering at Tarbiat Modares University to provide all the facilities to organize this event and share their experiences with all the participants to assure the best scientific gathering.**

**As the president of IPS, I have the honor to make sure that such scientifically versatile seminar fulfills its immediate and future objective goals.**

**M. Nekoomanesh**

**IPS President and Scientific Chair**

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# th International Seminar on Polymer Science and Technology



## About ISPST

The 14<sup>th</sup> International Seminar on Polymer Science and Technology (ISPST 2020) is the continuation of the ISPST past successful series, which is aimed to provide a forum for presentation, discussion and disseminations of current and future trends in polymeric materials and to facilitate information exchange among researchers with diverse interests, in various polymeric fields. The previous 13 seminars were held at:

- **ISPST 2018, Amirkabir University of Technology, Tehran, Iran.**
- **ISPST 2016, Islamic Azad University, Tehran, Iran.**
- **ISPST 2014, Iran Polymer and Petrochemical Institute, Tehran, Iran.**
- **ISPST 2012, Amirkabir University of Technology, Tehran, Iran.**
- **ISPST 2009, Iran Polymer and Petrochemical Institute, Tehran, Iran.**
- **ISPST 2007, Sharif University of Technology, Tehran, Iran.**
- **ISPST 2005, Amirkabir University of Technology, Tehran, Iran.**
- **ISPST 2003, Iran Polymer and Petrochemical Institute, Tehran, Iran.**
- **ISPST 2000, Amirkabir University of Technology, Tehran, Iran.**
- **ISPST 1997, Iran Polymer and Petrochemical Institute, Tehran, Iran.**
- **ISPST 1994, Shiraz University, Shiraz, Iran.**
- **ISPST 1990, Amirkabir University of Technology, Tehran, Iran.**
- **ISPST 1986, Amirkabir University of Technology, Tehran, Iran.**

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## Organizers

- **Tarbiat Modares University**
- **Iran Polymer Society**

## Sponsors

- **Iran Polymer and Petrochemical Institute**
- **Iranian Association of Polymer and Chemical Engineers**
- **Amirkabir University of Technology**
- **Sahand University of Technology**
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**Razzaghi-Kashani, M.**

**Sharif, A.**

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## TOPICS

*11 November; OPENING; PLENARY: 8:30-10:00*

HALL A	<i>Application of Polymers in Management of Natural Disasters; Green, Sustainable, Biopolymers, and Recycling; Adhesives, Paints, and Coatings</i>
HALL B	<i>Polymer Rheology, Processing and Technology; Elastomers and Compounding Technologies</i>
HALL C	<i>Polymer Nanocomposites, Blends and Alloys</i>
HALL D	<i>Simulation and Modeling of Polymeric Systems Nano, Smart, and Electronic Polymer System</i>
HALL E	<i>Polymer Synthesis and Polymerization</i>
HALL F	<i>Posters Presentation</i>

*12 November; PLENARY; D.M.Devine Lecture: 15:45-17:00*

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## Keynote Lectures

11 November 2020											
Time	8:30-9:15	9:15-10:00	10:00-10:40	10:45-12:15	65 min	13:20-14:00	14:00-15:30	15 min	15:45-16:30	16:30-17:30	17:30-18:10
HALL A	Opening Ceremony	Plenary Session S. Thomas	E. Vasheghani-Farahani	3 Lectures	BREAK	H. Mirzadeh	3 Lectures	BREAK	M. Jamshidi	2 Lectures	A. Sharif
HALL B			O. Urakawa	3 Lectures		V. Altstädt	3 Lectures		N. Mohammadi	2 Lectures	R. Foudazi
HALL C			M.H.N. Famili	3 Lectures		M.R. Nofar	3 Lectures		2 Lectures	S.C. Jana	
HALL D			M.H. Ghoreishy	3 Lectures		Y. Wang	3 Lectures		M. Rafizadeh	2 Lectures	Fat. Abbasi
HALL E			M. Nekoumanesh	3 Lectures		A. Ramazani-S.A	3 Lectures		2 Lectures	C.B. Park	
HALL F			Posters Presentation								

12 November 2020											
Time	8:30-9:10	9:15-10:45	15 min	11:00-11:40	11:40-12:40	50 min	13:30-14:10	14:15-15:45	15:45-16:25	16:25-17:00	
HALL A	Z. Ranjbar	3 Lectures	BREAK	A. Salimi	2 Lectures	BREAK	M. Ebrahimi	3 Lectures	Plenary Session M. Wilhelm	Declan. M. Devine & Closing Ceremony	
HALL B	K. Urayama	3 Lectures		M. Razzaghi-Kashani	2 Lectures		A. Blume	3 Lectures			
HALL C	K. Razavi	3 Lectures		H. Nazockdast	2 Lectures		A.R. Bahramian	3 Lectures			
HALL D	R. Ghaffarian	3 Lectures		Far. Abbasi	2 Lectures		B. Nyström	3 Lectures			
HALL E	S. Chattopadhyay	3 Lectures		B. Ghalei	2 Lectures		M. Abdollahi	3 Lectures			
HALL F	Posters Presentation										

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## Plenary Lecturers

**Prof. Sabu Thomas**  
Mahatma Gandhi University, India

**Prof. Manfred Wilhelm**  
Karlsruher Institut für Technologie (KIT), Germany

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Wednesday  
11 November 2020

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**Wednesday, November 11, Hall A, 9:15-10:00**

*Plenary Lecturer:* Sabu Thomas

**Engineering at the Nanoscale: A Strategy for Developing High Performance Functional Polymer Nanocomposites**

**Wednesday, November 11, Hall A, 10:00-10:40**

*Keynote Lecturer:* Ebrahim Vasheghani-Farahani

**Wednesday, November 11, Hall A, 13:30-14:10**

*Keynote Lecturer:* Hamid Mirzadeh

**Tissue Engineering and Biomaterials Iranian Bunch (TEBIB): Recent Achievements**

**Wednesday, November 11, Hall A, 15:45-16:25**

*Keynote Lecturer:* Masoud Jamshidi

**Polymeric Fibers as Reinforcement of Cement-based Materials under Flexural and Tensile Loads**

**Wednesday, November 11, Hall A, 17:30-18:10**

*Keynote Lecturer:* Alireza Sharif

**The Corona Virus and Polymers**

**Wednesday, November 11, Hall B, 10:00-10:40**

*Keynote Lecturer:* Osamu Urakawa

**Thermal and Rheological Behavior of Associative Polymers with Hydrogen Bonding and Ionic Interactions**

**Wednesday, November 11, Hall B, 13:30-14:10**

*Keynote Lecturer:* Volker Altstädt

**Summary of methods to improve the foamability of polylactide**

**Wednesday, November 11, Hall B, 15:45-16:25**

*Keynote Lecturer:* Naser Mohammadi

**How Does Microstructural Design Affect the Dynamics and Rheology of Segmented Polyurethanes?**

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**Wednesday, November 11, Hall B, 17:30-18:10**

*Keynote Lecturer:* Reza Foudazi

Rheology and Chemorheology of Lyotropic Liquid Crystal Templates

**Wednesday, November 11, Hall C, 10:00-10:40**

*Keynote Lecturer:* Mohammad Hossein Navid Famili

Electromagnetic Interference Shielding of highly filled Microcellular Nanocomposite Foams

**Wednesday, November 11, Hall C, 13:30-14:10**

*Keynote Lecturer:* Mohammadreza Nofar

Development of PLA/TPU blends: Effect of TPU Soft Segment Type and Chain Extender on Mechanical Properties

**Wednesday, November 11, Hall C, 17:00-17:40**

*Keynote Lecturer:* Sadhan C. Jana

Manufacturing of Netshape Articles from Polymeric Aerogels

**Wednesday, November 11, Hall D, 10:00-10:40**

*Keynote Lecturer:* Mir Hamidreza Ghoraishi

Advanced Material Models for Nonlinear Viscoelastic Behaviors of Cured Rubber Compounds

**Wednesday, November 11, Hall D, 13:30-14:10**

*Keynote Lecturer:* Yanwei Wang

Polymer Physics and Modeling of Polycarboxylate-based Superplasticizers in Concrete

**Wednesday, November 11, Hall D, 15:45-16:25**

*Keynote Lecturer:* Mehdi Rafizadeh

Mathematical Modeling in Polymer Science and Engineering

**Wednesday, November 11, Hall D, 17:30-18:10**

*Invited Lecturer:* Fatemeh Abbasi

Application of Machine Learning Concepts for Classification of Various Polymeric Systems

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**Wednesday, November 11, Hall E, 10:00-10:40**

*Keynote Lecturer:* Mehdi Nekoumanesh

**Wednesday, November 11, Hall E, 13:30-14:10**

*Keynote Lecturer:* Ahmad Ramezani

**Wednesday, November 11, Hall E, 17:00-17:40**

*Keynote Lecturer:* Chul B. Park

**Structurally Re-engineered Hybrid Silica Aerogels**



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Wednesday, 11 November, Hall A

## Opening Ceremony

8:30-9:15

Opening Speech (Dr. M. Razzaghi-Kashani, Seminar Chariman)  
Iran Polymer Society Report (Prof. M. Nekoomanesh, IPS President)  
Seminar Report (Dr. A.R. Bahramian, Executive Chairman)

09:15-10:00 Plenary Presenter: Sabu Thomas

*Mahatma Gandhi University, India*

**Engineering at the Nanoscale: A Strategy for Developing High Performance Functional Polymer Nanocomposites**

*Application of Polymers in Management of Natural Disasters  
Green, Sustainable, Biopolymers, and Recycling*

Chairpersons: Sharif, A.;

10:00-10:40 Keynote Lecturer: Vasheghani-Farahani, E.

*Tarbiat Modares University, Iran*

Title?

Code	Time	Title
A-10-1592-1	10:45-11:15	Saeed Khojasteh Khosro, Ali Shalbafan, Heiko Thoemen; <b>Improving bio-based poly(lactic acid) properties using polycarbonate</b>
A-10-1645-2	11:15-11:45	Erfan Rezvani Ghomi, Lakshminarayanan Rajamani, Rasoul Esmaeely Neisiany, Fatemeh Khosravi, Mohamadreza Shakiba, Seeram Ramakrishna, <b>Aligned PCL/Gelatin fiber mats for wound dressing application</b>
A-10-1547-1	11:45-12:15	Shahin Jabari, Saeed Beigi-Boroujeni, Milad Jafari-Nodoushan, Mehrnoosh Ebrahimibagha, Dariush Ebrahimibagha, <b>Emulsion Electrospun Fiber Mats of PCL and Scrophularia Striata for Wound Dressing Applications</b>

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Wednesday, 11 November, Hall A

*Application of Polymers in Management of Natural Disasters*

**Chairpersons: Sharif, A.;**

**13:30-14:10 Keynote Lecturer: Hamid Mirzadeh**

*Amirkabir University of Technology, Iran*

**Tissue Engineering and Biomaterials Iranian Bunch (TEBIB):  
Recent Achievements**

A-10-1804-1	14:15-14:45	Amir Abbas Abedini, Gholamreza Pircheraghi, <b>Effect of thyme honey incorporation on properties of alginate-quince seed gum films</b>
A-10-1678-1	14:45-15:15	Aysan Baharian Khoshkhoo, Mina Habibzadeh, Sina Andalib, Nasser Nikfarjam, Kobra Rostamizadeh, <b>In vitro and in vivo study of Dexamethasone sodium phosphate loaded PCL/Chitosan nanofiber mats as wound healing dress</b>
A-10-1740-1	15:15-15:45	Mahnaz Hasanpur, Davoud Afshar, Nasser Nikfarjam, <b>Antibacterial Cotton Fabrics Grafted by Imidazolium-Type Ionic Liquid Monomers</b>

**15:45-16:25 Keynote Lecturer: Masoud Jamshidi**

*Iran University of Science and Technology, Iran*

**Polymeric Fibers as Reinforcement of Cement-based Materials under Flexural and Tensile Loads**

A-10-1575-2	16:25-16:55	Raziye Marashi poor, Zahra niazi <sup>1</sup> , Mohsen Ashjari: <b>Preparation of rPET fiber based aerogels for efficient oil spill cleanup applications</b>
A-10-1820-1	16:55-17:25	Nadereh Golshan Ebrahimi, Mohammad Shahrousvand, <b>The effect of hydroxypropyl cellulose presence on the morphology and physical/mechanical properties of polycaprolactone beaded nanofibers as potential scaffolds in tissue engineering</b>

**17:30-18:10 Keynote Lecturer: Alireza Sharif**

*Tarbiat Modares University, Iran*

**The Corona Virus and Polymers**

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Wednesday, 11 November, Hall B

## *Polymer Rheology, Processing and Technology*

Chairperson: Ahmadi, S.

10:00-10:40 Keynote Lecturer: Osamu Urakawa

*Osaka University, Japan*

### Rheological Behavior of Associative Supramolecular Polymers

Code	Time	Title
A-10-1619-1	10:45-11:15	Sajad Rasouli, Mohammad Reza Moghbeli, Seyed Majid Hashemianzadeh, <b>Aggregation of Poly(N-isopropylacrylamide) (PNIPAm) in Water with Temperature: Dissipative Particle Dynamics (DPD) Study</b>
A-10-1674-1	11:15-11:45	Marzie Alidadi-Shamsabadi, Shirin Shokoohi, <b>Investigation of the Compatibility of PS/EPDM/EPDM-g-GMA/PA6 Ternary Blend by Evaluating the Rheological Behavior</b>
A-10-1588-1	11:45-12:15	Zhi Cao, Declan Devine, Manfred Penning, Noel Gately, <b>Rheological properties of different type of Shellac</b>

Wednesday, 11 November, Hall B

Chairperson: Ahmadi, S.

13:30-14:10 Keynote Lecturer: Volker Altstädt

*University of Bayreuth, Germany*

### Summary of methods to improve the foamability of polylactide

A-10-1566-1	14:15-14:45	Nastaran Mosleh, Soheil Dariushi, Masoud Esfandeh, <b>Investigation of Flexural Properties of 3D Printed Continuous Fiber- Reinforced Composites</b>
A-10-1708-1	14:45-15:15	Fatemeh Salmani, Maryam Zajjaghi, Tohid Abdolazadeh, Shervin Ahmadi, <b>Chain branching of poly propylene toward high melt strength pp during reactive melt blending</b>
A-10-1645-1	15:15-15:45	Seyed Reza Nabavi, Mohamadreza Shakiba, Erfan Rezvani Ghomi, <b>The effect of change in the electrospinning temperature on porosity and morphology of polyacrylonitrile membrane as a key parameter for oil/water separation</b>

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Wednesday, 11 November, Hall B

Chairperson: Ahmadi, S.

15:45-16:25 Keynote Lecturer: Naser Mohammadi

*Amirkabir University of Technology, Iran*

**How Does Microstructural Design Affect the Dynamics and Rheology of Segmented Polyurethanes?**

Hamid Reza Heydarnezhad, Naser Mohammadi, Arantxa Arbe, Angel Alegria

A-10-149-1	16:25-16:55	Ali Kariman Moghaddam, Ahmad Ramazani Saadat Abadi, <b>Application of Generalized Bracket Formalism to Model the Rheology of a System Containing Bentonite and Polymer Solution</b>
A-10-1765-2	16:55-17:25	Amirhossein Tavakoli, Hamed Aghababaei, Ahmad Ramazani S.A., <b>Novel and facile water-based emulsion copolymerization of styrene and methyl-acrylate and investigation of thermal and rheological behaviours</b>

17:30-18:10 Keynote Lecturer: Reza Foudazi

*New Mexico State University, USA*

**Rheology and Chemorheology of Lyotropic Liquid Crystal Templates**

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Wednesday, 11 November, Hall C

## *Polymer Nanocomposites, Blends and Alloys*

Chairperson: Ostadmovahed, S., Alimardani, M.,

10:00-10:40 Keynote Lecturer: Mohammad Hossein Navid Famili

*Tarbiat Modares University, Iran*

**Electromagnetic Interference Shielding of highly filled Microcellular Nanocomposite Foams**

Code	Time	Title
A-10-1578-1	10:45-11:15	Milad Alizadeh Sooreh, Milad Saadat Tagharoodi, Mohammad Khabiri, Mahmoud Razavizadeh, Mohammad Reza Pourhossaini, <b>Thermoplastic Polyurethane/Terpolyamide Blends: Preparation and Miscibility</b>
A-10-1625-1	11:15-11:45	Mehdi Haji Abdolrasouli, Ebrahim Jalali Dil, Jamshid Khorshidi Mal Ahmadi, <b>Thermal Annealing behavior of Polylactic acid/Polycaprolacton Bio based co-continuous blend</b>
A-10-86-1	11:45-12:15	Seifollah Jamalpour, Maral Ghahramani, Seyed Reza Ghaffarian, Mehran Javanbakht, <b>Effect of organic-inorganic hybrid nanoparticles for improving the electrochemical performace of PVDF as a gel polymer electolyte for lithium ion batteries</b>

Wednesday, 11 November, Hall C

Chairperson: Ostadmovahed, S., Alimardani, M.,

13:30-14:10 Keynote Lecturer: Mohammadreza Nofar

*Istanbul Technical University, Turkey*

**Development of PLA/TPU blends: Effect of TPU Soft Segment Type and Chain Extender on Mechanical Properties**

Yusuf Kahraman, Mohammadreza Nofar

A-10-1705-1	14:15-14:45	Maryam Baniamer, Abdolreza Aroujalian Mashhadi, Shahram Sharifnia, <b>CO2 Separation and Photoconversion using PEBAX/TiO2 Blended in Polyethersulfone Photocatalytic Membrane</b>
A-10-1741-2	14:45-15:15	M. Shojaipour, M. Ghaemy, J. Barzin, M. Vahedi, <b>Hydrogel base on chitosan recyclable ion exchanger for efficient removal of chromate and nitrate from water: Synthesis, characterization and application in membrane</b>
A-10-1036-2	15:15-15:45	Mohadeseh Montahayie, Kosar Arab, Mahdi Tohidian, <b>Organically modified multi-walled carbon nanotubes and chitosan nanocomposites as polyelectrolyte membranes for fuel cell applications</b>

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# th International Seminar on Polymer Science and Technology



## Wednesday, 11 November, Hall C

Chairperson: Ostadmohamed, S., Alimardani, M.,

A-10-1635-1	15:45-16:15	Nafise Babaei, Omid Moghaddam, <b>Sag resistance improvement of water borne Polyurethane resin by Nano fumed silica for coating application</b>
A-10-1808-1	16:15-16:45	Yasaman Alaei, Reza Bagheri, <b>Experimental Studies on Modified Flame Retardant PC/ABS Blends</b>

16:45-17:25 **Keynote Lecturer: Sadhan C. Jana**

*University of Akron, USA*

**Manufacturing of Netshape Articles from Polymeric Aerogels**

Nicholas Teo, Yimin Yao, Qihang Chen, Sadhan C. Jana

## Wednesday, 11 November, Hall D

### *Simulation and Modeling of Polymeric Systems*

Chairperson: Ghoreishy, M.H

10:00-10:40 **Keynote Lecturer: Mir Hamidreza Ghoraihi**

*Iran Polymer and Petrochemical Institute, Iran*

**Advanced Material Models for Nonlinear Viscoelastic Behaviors of Cured Rubber Compounds**

A-10-1667-1	10:45-11:15	A. Moghaddaszadeh, P. Sadeghinia, N. Najmuddin, <b>Finite element modeling and experimental evaluation of the mechanical properties of 3D printed polycaprolactone-hydroxyapatite composite scaffolds</b>
A-10-1597-2	11:15-11:45	Hassan Shooli, Shahryar Malekie, Seyed Mohammad Amin Hosseini, <b>Preliminary studies on nanocomposites containing PA6/WO3 as X-ray and gamma-ray shields using the Monte Carlo method</b>
A-10-1814-1	11:45-12:15	Ali Armand, Zahra Mansourpour, <b>Simulation of non-newtonian molten polymer fluid flow by Lattice Boltzmann Method</b>

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th International Seminar  
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Wednesday, 11 November, Hall D

Chairperson: Famili, M.H.N.

13:30-14:10 Keynote Lecturer Yanwei Wang

*Nazarbayev University, Kazakhstan*

**Polymer Physics and Modeling of Polycarboxylate-based Superplasticizers in Concrete**

A-10-1635-2	14:15-14:45	Omid Moghaddam, Azizollah Nodehi, Mohammad Atai, <b>A Mathematical Approach to Investigate Polymer Composition in Terpolymerization of Carboxylated Acrylonitrile Butadiene Rubber</b>
A-10-1834-1	14:45-15:15	Mohammad Abolghasemzadeh, Hossein Mohammadi, Youness Alizadeh, <b>Fracture Assessment of Polymethyl-methacrylate (PMMA) Specimens Weakened By Sharp Notches</b>
A-10-1632-1	15:15-15:45	Niloofer parhizkar, Mahdi Salami Hosseini, <b>Numerical Study on The Effect of The Surface Tension And Density on The Pinch-Off Behavior of The Droplet in Drop Formation Process</b>

Wednesday, 11 November, Hall D

Chairperson: Famili, M.H.N.

15:45-16:25 Keynote Lecturer: Mehdi Rafizadeh

*Amirkabir University of Technology, Iran*

**Mathematical Modeling in Polymer Science and Engineering**

A-10-1553-1	16:25-16:55	Mohammad Hossein Karami, Mohammad Reza Kalaei, Saeedeh Mazinani, V. García-Martínez, Renate Maria Ramos Wellen, Gassan Hodaifa, A.M. Shanmugaraj, Kibum Kim, <b>Isoconversional Model Approach and Cure Kinetics Of Epoxy/ NBR Nanocomposites</b>
A-10-1809-2	16:55-17:25	Babak Valipour Goodarzi, Ahmadreza Bahramian, <b>Comparing Theoretical Modeling and Machine Learning Approach for Predicting Thermal Conduction of Novolac Aerogels</b>

17:30-18:00 Invited Lecturer: Fatemeh Abbasi

*University of Guelph, Canada*

**Application of Machine Learning Concepts for Classification of Various Polymeric Systems**

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# th International Seminar on Polymer Science and Technology



Wednesday, 11 November, Hall E

## *Polymer Synthesis and Polymerization*

Chairperson: Abdollahi, M., Ghahramani, M.

10:00-10:40 Keynote Lecturer: Mehdi Nekoumanesh-Haghighi

*Iran Polymer and Petrochemical Institute, Iran*

**Title?**

Code	Time	Title
A-10-338-1	10:45-11:15	Marzieh Golshan, Ehsan Rostami-Tapeh-Esmail, Mehdi Salami-Kalajahi, Hossein Roghani-Mamaqani, <b>Fluorescence properties of perylene-based poly(amidoamine) dendrimer</b>
A-10-1155-4	11:15-11:45	Ahad Hanifpour, Naeimeh Bahri-Laleh, Mehdi Nekoomanesh-Haghighi, <b>Coordinative Chain Transfer Polymerization of 1-Decene in the Presence of A Ti-Based Diamine Bis(phenolate) Catalyst: A Green approach to Produce Low Viscosity PAOs</b>
A-10-1799-1	11:45-12:15	B. Ghods, F. Taherian, <b>Preparation of solvent-based polyurethane adhesive for flock application</b>

Wednesday, 11 November, Hall E

Chairperson: Abdollahi, M., Ghahramani, M.

13:30-14:10 Keynote Lecturer: Ahmad Ramezani

*Sharif University of Technology, Iran*

**Title?**

A-10-1367-3	14:15-14:45	Shabnam kazemi, Azam Ghadami, Fatemeh Yazdian, <b>Synthesis And Characterization of Chitosan-Magnetite-Reduced Graphene Oxide Nanocomposites for the Targeted Delivery of Curcumin</b>
A-10-535-1	14:45-15:15	Seyyedeh Mahboubeh Razavi, Mahdi Abdollahi, <b>Synthesis and Characterization of Carboxyl-Terminated Telechelic Polystyrene by Reverse Iodine Transfer Polymerization and Postmodification</b>
A-10-1831-1	15:15-15:45	Safieh Mosavi Madani, Mohammad Reza Pourhossaini, Mahmmod Razavizadeh, Morteza Ahmadi, Mohammad Khabiri, Milad Saadat Tagharoodi, <b>Evaluation the performance of bisphenol A Novolac resin as a carbon fiber surface modifier</b>



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Wednesday, 11 November, Hall E

Chairperson: Abdollahi, M., Ghahramani, M.

A-10-1620-1	15:45-16:15	Reza Darvishi, Mohammad Javad Bijhanmanesh, Ali Moshkriz, <b>Influences of the addition methods of intercalated Mg-Al-hydroxide layered double hydroxide in suspension polymerization of vinyl chloride on poly(vinyl chloride) particles properties</b>
A-10-1703-2	16:15-16:45	Zahra Mortazavi, <b>Synthesis and Characterization of Organic-Inorganic Hybrid Poly Methyl Methacrylate (PMMA)/ Silica Nanocomposites via two Effective Initiators</b>

16:45-17:25 **Keynote Lecturer: Chul B. Park**

*University of Toronto, Canada*

**Structurally Re-engineered Hybrid Silica Aerogels**

S. Rezaei, C.B. Park

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on Polymer Science and Technology



Thursday  
12 November

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on Polymer Science and Technology



Thursday, November 12 Hall A, 8:30-9:10

*Keynote Lecturer:* Zahra Ranjbar

Antiviral Coatings

Thursday, November 12 Hall A, 10:40-11:20

*Keynote Lecturer:* Ali Salimi

The Future Opportunities for Biobased Adhesives and Coatings

Thursday, November 12 Hall A, 13:30-14:10

*Keynote Lecturer:* Morteza Ebrahimi

Thursday, November 12 Hall A, 15:55-16:35

*Plenary Lecturer:* Manfred Wilhelm

New Combined Methods to Characterize Polymer Composition and Rheological Properties: SEC-NMR and Rheo-NMR

Thursday, November 12 Hall B, 8:30-9:10

*Keynote Lecturer:* Kenji Urayama

Dynamic Crack in Filler-Reinforced Elastomers

Thursday, November 12 Hall B, 10:40-11:20

*Keynote Lecturer:* Mehdi Razzaghi-Kashani

Customized Dielectric Elastomer Actuators: PDMS Composites

Thursday, November 12 Hall B, 13:30-14:10

*Keynote Lecturer:* Anke Blume

Micro- and Macro-dispersion of silica filled tread compounds

Thursday, November 12 Hall C, 8:30-9:10

*Keynote Lecturer:* Mir Karim Razavi Aghjeh

Structure Properties Relationship in Polypropylene Based Multicomponent Systems

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**Thursday, November 12 Hall C, 10:40-11:20**

*Keynote Lecturer:* Hossein Nazockdast

**Microstructure-Properties Relationship of Nanoparticle-Filled Polymer Blends**

**Thursday, November 12 Hall C, 13:30-14:10**

*Keynote Lecturer:* Ahmad Reza Bahramian

**Enhancement of scale variation on thermo-physical behavior of cubic-like polymeric aerogel**

**Thursday, November 12 Hall D, 8:30-9:10**

*Keynote Lecturer:* Reza Ghaffarian

**Thursday, November 12 Hall D, 10:40-11:20**

*Keynote Lecturer:* Farhang Abbasi

**Thursday, November 12 Hall D, 13:30-14:10**

*Keynote Lecturer:* Bo Nyström

**Self-Assembly of Amphiphilic Copolymers in Aqueous Solution Studied by Scattering Methods**

**Thursday, November 12 Hall E, 8:30-9:10**

*Keynote Lecturer:* Sujay Chattopadhyay

**Selective Recovery of Organic Acids from Their Mixtures using Novel Functionalized Anion-Exchange Membranes**

**Thursday, November 12 Hall E, 10:40-11:20**

*Keynote Lecturer:* Behnam Ghalei

**Polymer Membranes for Energy and Environmental Applications: From Material Chemistry to Engineering Challenges**

**Thursday, November 12 Hall E, 13:30-14:10**

*Keynote Lecturer:* Mahdi Abdolahi

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# th International Seminar on Polymer Science and Technology



Thursday, November 12, Hall A

*Application of Polymers in Management of Natural Disasters  
Green, Sustainable, Biopolymers, and Recycling  
Adhesives, Paints, and Coatings*

**Chairperson: Ghasemirad, S.**

**8:30-9:10 Keynote Lecturer: Zahra Ranjbar**

*Institute for Color Science and Technology, Iran.*

**Antiviral Coatings**

Code	Time	Title
A-10-405-1	9:10-9:40	Hossein Yari, Saeed Amrollahi, <b>Enhanced weathering durability of Epoxy silicone coating with Graphene oxide Nanoplatelets modified with conducting polymers</b>
A-10-1807-1	9:40-10:10	Mohammad Mir, Somayeh Ghasemirad, <b>Gemini Surfactant: A Miracle for Preparation of Highly Stable Polymer Emulsion</b>
A-10-338-2	10:10-10:40	Erisa Ferasat, Marzieh Golshan, Mehdi Salami-Kalajahi, Hossein Roghani-Mamaqani, <b>Synthesis of fluorescent hybrid coumarin/perylene pigment</b>

Thursday, November 12, Hall A

**Chairperson: Ghasemirad, S.**

**10:40-11:20 Keynote Lecturer: Ali Salimi**

*Iran Polymer and Petrochemical Institute, Iran*

**The Future Opportunities for Biobased Adhesives and Coatings**

Code	Time	Title
A-10-1381-2	11:20-11:50	Ali Ahmadi-Dehnoei, Somayeh Ghasemirad, <b>Preparation of Nanocomposite Pressure-Sensitive Adhesive Using Polysilsesquioxane-Acrylic Core-Shell Latex Nanoparticles</b>
A-10-1613-2	11:50-12:20	M. Hesabi, I. Major, E. Fuenmayor, D. Devine, <b>Effect of UV weathering on the thermal decomposition kinetic of thermosetting composite for outdoor applications</b>

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Thursday, November 12, Hall A

Chairperson: Ghasemirad, S.

13:30-14:10 Keynote Lecturer: Morteza Ebrahimi

*Amirkabir University of Technology, Iran*

**Title?**

Code	Time	Title
A-10-89-1	14:10-14:40	Ahad Hanifpour, Naeimeh Bahri-Laleh, Mehdi Nekoomanesh, <b>Methacrylate functionalized POSS as an efficient adhesion promoter in olefin-based adhesives</b>
A-10-1618-1	14:40-15:10	Ali Ebaidirad, Mohammad Hossein Beheshty, <b>The Effect of Initiator on Structural Acrylic Adhesives Properties</b>
A-10-1155-6	15:10-15:40	Ahad Hanifpour, Naeimeh Bahri-Laleh, Mehdi Nekoomanesh-Haghighi, <b>Single-phase photo-cross-linkable adhesive synthesized from methacrylic acid-grafted on1-decene/9-decene-1-ol cooligomer</b>

15:45-16:25 Plenary Lecturer: Prof. Manfred Wilhelm

*Karlsruher Institut für Technologie (KIT), Germany*

**New Combined Methods to Characterize Polymer Composition and Rheological Properties: SEC-NMR and Rheo-NMR**

M. Wilhelm, C. Botha, K.-Fr. Ratzsch

**Closing Ceremony**

16:25-17:00

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# th International Seminar on Polymer Science and Technology



Thursday, November 12, Hall B

## *Elastomers and Compounding Technologies*

Chairpersons: Razzaghi-Kashani, M.;

8:30-9:10 Keynote Lecturer: Kenji Urayama

*Kyoto Institute of Technology, Japan*

### Dynamic Crack in Filler-Reinforced Elastomers

Code	Time	Title
A-10-1714-1	9:10-9:40	Golrokh Fard-Zolfaghari, Ali Abbasian, Mehdi Razzaghi-Kashani, <b>Investigation of Aromatic Oil substitution with Vegetable Oils on Abrasion Behavior of carbon black filled SBR</b>
A-10-1832-1	9:40-10:10	M. Ahmadi, M. Pourhossaini, M. Razavizadeh, <b>Evaluation of the effect of nanoclay on solvent resistance of ethylene propylene diene monomer elastomers</b>
A-10-1798-1	10:10-10:40	A. R. Baniasad, H. Najjarzadeh, <b>A Novel Strain Sweep Method to Compare Energy Loss in Tread Compounds using Tripsometer</b>

Thursday, November 12, Hall B

Chairperson: Razzaghi-Kashani, M.;

10:40-11:20 Keynote Lecturer: Mehdi Razzaghi-Kashani

*Tarbiat Modares University, Iran*

### Customized Dielectric Elastomer Actuators: PDMS Composites

Code	Time	Title
A-10-26-2	11:20-11:50	Fatemeh Khodkar, <b>An Applicable Method to Determine Unsaturation Levels in Butyl Rubber</b>
A-10-1152-2	11:50-12:20	Hasti Bizhani, Ali Asghar Katbab, Mahshid Maroufkhani, Raquel Verdejo, <b>Electrically Conductive Nanocomposite Based on Ethylene-Propylene-Diene Monomer/Multiwall Carbon Nanotubes as a High-Frequency Electromagnetic Wave Absorber</b>

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# th International Seminar on Polymer Science and Technology



Thursday, November 12, Hall B

Chairpersons: Razzaghi-Kashani, M.;

13:30-14:10 Keynote Lecturer: Anke Blume

*University of Twente, The Netherlands*

## Micro- and Macro-dispersion of silica filled tread compounds

J. Jin, D. Boiten, A. Kharel, S. Sattayanurak, W. Kaewsakul, W. Dierkes, J. W. M. Noordermeer, F. Grunert, A. Blume

Code	Time	Title
A-10-124-1	14:10-14:40	Mehdi Shiva, Morteza Golmohammadi, Fatemeh Noruzi, Mohammad Fekri, <b>Effects of Silica on Rubber to Brass-Plated Steel Cord Adhesion</b>
A-10-1750-1	14:40-15:10	Mohammad Raef, Leila Noein, mehdi Razzaghi-Kashani, <b>Engineering the graphene surface chemistry for gas barrier performance of styrene butadiene rubber composites</b>
A-10-1691-1	15:10-15:40	Mehdi Razzaghi-Kashani, Mana Nabavian-Kalat, <b>Effect of graphene platelets on the dispersion and dynamic-mechanical properties of silica-filled styrene butadiene rubber</b>



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# th International Seminar on Polymer Science and Technology



Thursday, November 12, Hall C

## *Polymer Nanocomposites, Blends, and Alloys*

Chairperson: Abbassi-Sourki, F., Alimardani, M.,

8:30-9:10 Keynote Lecturer: Mir Karim Razavi Aghjeh

*Sahand University of Technology, Iran*

### Structure properties relationship in polypropylene based multicomponent systems

Code	Time	Title
A-10-1788-1	9:10-9:40	Mohammadsoroush Abzan, Shervin Ahmadi, Ahmad Arefazar, <b>Investigation of GO Network Formation in N6/PC Blend: Scrutinizing Thermal Degradation and Rheological Behavior</b>
A-10-1622-1	9:40-10:10	Faezeh Razavi Zadeh, Kimiya Rahmani, Mohsen Shahrousvand, <b>Synthesis of poly (<math>\epsilon</math>-caprolactone)/crosslinked poly (hydroxyethyl methacrylate) for tissue engineering scaffolds</b>
A-10-1833-1	10:10-10:40	Mohammad Amin Abbas-zadeh, Amir hesam Arabsorkhi Mishabi, Amir Ershad-Langroudi, <b>Investigation of thermal stability of polyurethane/silica aerogel nanocomposite foams</b>

Thursday, November 12, Hall C

Chairperson: Abbassi-Sourki, F., Alimardani, M.,

10:40-11:20 Keynote Lecturer: Hossein Nazockdast

*Amirkabir University of Technology, Iran*

### Microstructure-Properties Relationship of Nanoparticle-Filled Polymer Blends

Code	Time	Title
A-10-1789-2	11:20-11:50	Alireza Aminoroaya, Saied Nouri Khorasani, Rouhollah Bagheri, Zahra Talebi, Rasoul Esmaeely Neisiany, <b>Synthesis and surface modification of mesoporous silica aerogel</b>
A-10-1796-1	11:50-12:20	M.Afzali, M. Rostami, <b>Investigation the effect of a surface-treated nanoclay on corrosion properties of a polyisobutylene self-healing composite coating</b>

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# th International Seminar on Polymer Science and Technology



Thursday, November 12, Hall C

Chairperson: Abbassi-Sourki, F., Alimardani, M.,

13:30-14:10 Keynote Lecturer: Ahmad Reza Bahramian

*Tarbiat Modares University, Iran*

**Enhancement of scale variation on thermo-physical behavior of cubic-like polymeric aerogel**

Code	Time	Title
A-10-1851-1	14:10-14:40	Amirhossein Mahtabani, Ilkka Rytöluoto, Rafal Anyszka, Eetta Saarimäki, Xiaozhen He, Kari Lahti, Mika Paajanen, Wilma Dierkes, Anke Blume, <b>How Does Silica Functionalization Affect Charge Trapping and Transport In Nanodielectrics Under DC?</b>
A-10-104-4	14:40-15:10	F. Rahimi, M. Rafizadeh, <b>Effect of Sepiolite Nano Clay on Oxygen Permeability of Poly Butylene Succinate Matrix</b>
A-10-1702-1	15:10-15:40	Shima Zadegankhajeh, Fatemeh Gharibi, Alireza Sharif, Asghar Habibnejad Korayem, <b>Improved stability of graphene oxide nanosheets in cementitious media by grafting the nanosheets with modified chitosan</b>

Thursday, November 12, Hall D

*Nano, Smart, and Electronic Polymer System*

Chairperson: A. Sharif, Arabpour, F.

8:30-9:10 Keynote Lecturer: Reza Ghaffarian

*Amirkabir University of Technology, Iran*

**Title?**

Code	Time	Title
A-10-1583-1	9:10-9:40	Mostafa Rezaei, Elahe Mehrbakhsh, <b>Synthesis and characterization of thermoplastic polyurethane with low stress relaxation for orthodontic chains application</b>
A-10-1590-1	9:40-10:10	Golara Kafili, Elnaz Tamjid, Hasan Niknejad, Abdolreza Simchi, <b>Processing of a temperature responsive human amniotic membrane-derived hydrogel for soft tissue engineering by 3D bioprinting</b>
A-10-1608-1	10:10-10:40	Maryam Bayat, Carlos Alemán, Francesc Estrany, <b>Investigation of the electrochemical behavior of electrochromic polypyrrole film doped with dye molecule against environmental conditions</b>

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# th International Seminar on Polymer Science and Technology



## Thursday, November 12, Hall D

Chairperson: A. Sharif, Arabpour, F.

10:40-11:20 Keynote Lecturer: Farhang Abbasi

*Sahand University of Technology, Iran*

**Title?**

Code	Time	Title
A-10-1661-1	11:20-11:50	Pooria Rahmani, Akbar Shojaei, <b>Stretchable and electrical conductive acrylic acid hydrogel as a strain sensor</b>
A-10-1781-1	11:50-12:20	Sara Taherinezhad, Mehdi Entezam, Kamiyar Zomorodian <b>Morphology and Mechanical Properties of Zataria Multiflora-loaded Mats Based on Poly(vinylidene fluoride) Electrospun Nanofibers</b>

## Thursday, November 12, Hall D

Chairperson: A. Sharif, Arabpour, F.

13:30-14:10 Keynote Lecturer: Bo Nyström

*University of Oslo, Norway*

### Self-Assembly of Amphiphilic Copolymers in Aqueous Solution Studied by Scattering Methods

Bo Nyström, Natalie Gjerde, Kaizheng Zhu, Kenneth, D. Knudsen, Leva Momtazi, Vahid Forooghi Motlaq, Josefine Eilsø Nielsen

Code	Time	Title
A-10-1042-2	14:10-14:40	Samane Akhlaghpasand, Naser Mohammadi, <b>Rheological characterization of hyperentanglement and its effects on the crystallinity and intrinsic toughness of poly (vinyl alcohol)</b>
A-10-1806-1	14:40-15:10	Mahdi Abdollahi, Ali dinari, <b>Fabrication of size tunable vehicles via combination of lignin- based graft copolymer for directed drug delivery approach</b>
A-10-1680-1	15:10-15:40	S. Rahmani <b>A Study on Ionomer Solution Casting: Selecting an Appropriate Aprotic Solvent</b>

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# th International Seminar on Polymer Science and Technology



Thursday, November 12, Hall E

## *Polymer Synthesis and Polymerization*

Chairperson: Abdollahi, M. Ghahramani, M.

8:30-9:10 Keynote Lecturer: **Sujay Chattopadhyay**

*Indian Institute of Technology Roorkee, India*

### **Selective Recovery of Organic Acids from Their Mixtures using Novel Functionalized Anion-Exchange Membranes**

Sujay Chattopadhyay, Anusha Chandra, Bhuvanesh E., Priyabrata Mandal

Code	Time	Title
A-10-1584-1	9:15-9:45	Kamran Foroutani, Seyed Morteza Ghasemi, Behzad Aourabbas, <b>Highly Ordered Isoporous Membranes Prepared from Strongly Segregated Diblock Copolymer via SNIPS</b>
A-10-236-2	9:45-10:15	Rajabali Ebrahimi, Nima Rahmani, <b>Sonochemical synthesis and swelling of Fe<sub>3</sub>O<sub>4</sub> nanocomposite hydrogel</b>
A-10-1155-5	10:15-10:45	Ahad Hanifpour, Naeimeh Bahri-Laleh, Mehdi Nekoomanesh-Haghighi, <b>1-Decene Oligomerization by New Complexes Bearing [ONNO]-Type Salan Ligands: Effect of Ligand Struct</b>

Thursday, November 12, Hall E

## *Polymer Synthesis and Polymerization*

Chairperson: Abdollahi, M., Ghahramani, M.

10:45-11:25 Keynote Lecturer: **Behnam Ghalei**

*Kyoto University, Japan*

### **Polymer Membranes for Energy and Environmental Applications: From Material Chemistry to Engineering Challenges**

A-10-1780-1	11:30-12:00	Mohamadreza Mahmoudian, Fatemeh Goharpey, Morteza Behzadnasab, Majid Haghgoo, <b>The Process of Fabricating selected-shape Microparticles with narrow size distribution via Photopolymerization Method</b>
A-10-1672-1	12:00-12:30	Fereshteh Karkhaneh Yousefi, Ali Jannesari, Shahla Pazokifard, <b>Terpolymerization of triisopropylsilyl acrylate, methyl methacrylate and n-butyl acrylate: kinetic studies</b>

Thursday, November 12, Hall E

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on Polymer Science and Technology



*Polymer Synthesis and Polymerization*

Chairperson: Abdillahi, M, A. Ghahramani, M.

13:30-14:10 Keynote Lecturer: Mahdi Abdollahi

*Tarbiat Modares University, Iran*

**Title?**

A-10-1586-1	14:15-14:45	Mohammad Aghajohari, Alireza Sharif, Mina Adib, <b>Manipulating top layer characteristics of thin film composite membranes by using dicationic ionic liquids as additives</b>
A-10-104-5	14:45-15:15	Mehdi Rafizadeh, Seyed Ali Gatzmirian, <b>Preparation and Characterization of Sulfonated Poly Butylene (Succinate-co-Fumarate)</b>
A-10-1737-1	15:15-15:45	Rezvan Balilvand, Mohammad Atai, Azizollah Nodehi, <b>Solution photopolymerization of acrylic/itaconic acid: effect of different transfer agents on molecular weight</b>

15:45-16:25 Plenary Lecturer: Prof. Manfred Wilhelm

*Karlsruher Institut für Technologie (KIT), Germany*

**New Combined Methods to Characterize Polymer Composition and Rheological Properties: SEC-NMR and Rheo-NMR**

16:25-17 Prof. Declan M. Devine

*Athlone Institute of Technologies, Ireland*

**An Overview of Research Activities and Opportunities at Athlone Institute of Technologies Polymer Research Group**

**Closing Ceremony**

**17:00-17:30**

**The Best Paper Award**

**ISPST Memories**

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Poster  
Listing



## *Application of Polymer in Management of Natural Disasters Green, Sustainable, Biopolymers, and Recycling Adhesives, Paints, and Coatings*

### *Green, Sustainable, Biopolymers, and Recycling*

A-10-1081-2	The Effect of Cellulose Acetate/CNT Morphology on the Final Response of Prepared Sensitive Layer to Detect of Lung Cancer Biomarkers	A. Noormohammad, P. Molla-Abbasi
A-10-590-1	Effect of Solvent and EDC/NHS Coupling Reagent for Thiolated Chitosan Synthesis	Ali Moradian, Mojgan Zandi, Morteza Behzadnasab, Mohammad Pezeshki-Modaress
A-10-590-2	Effect of crosslinking density on the toughness of Poly(glycerol sebacate) bioelastomers	Amir Hesam Arabsorkhi, Mojgan Zandi, Fahimeh Askari, Mohamad Pezeshki-Modaress
A-10-1576-1	Effect of different sulfonated polysulfone contents on electrochemical properties	Bitra Roshanravan, Habibollah Younesi, Sang-Hyun Pyo, Mahdi Abdollahi, Mostafa Rahimnejad
A-10-1367-4	Improved Anticancer Properties of Curcumin Using Chitosan-Magnetite-Reduced Graphene Oxide Nanocarrier	shabnam kazemi, azam ghadami, fatemeh yazadian
A-10-1560-2	Effect of pH on oscillatory gel induced structure of graphene oxide and polyvinyl alcohol mixed suspension	Asal Yousefi siavoshani, Hossein Nazokdast, Hamid Garmabi, Fatemeh Mohammadzadeh
A-10-1594-1	Surface modification of polypropylene with poly octahedral silsesquioxane nanostructures for biomaterial applications	Rahele mashhadi, Babak akbari, Majid karimi
A-10-81-3	Solvent System Selection in Electrospinning of Poly(lactic acid)	Zahra Mahdavi Moqadam, Jafar Khademzadeh Yeganeh, Saeedeh Mazinani, Mohamadreza Kalae
A-10-81-4	Electrospinning of Poly (lactic acid) in Prsence of Silicone Rubber Nanoparticles	Zahra Mahdavi Moqadam, Jafar Khademzadeh Yeganeh, Mohamadreza Kalae, Saeedeh Mazinani
A-10-1642-1	Preparation of self-electrical stimuli gel-fiber substrate as a promising candidate for neural tissue engineering applications	Mojdeh Mohseni, Ahmad Ramazani
A-10-1644-1	Improvement of MG63 cell attachment on porous polyurethane scaffold with incorporation of hydroxyapatite	Mr Seyyed-Ahmad Seyyed-Nasrollah, Najmeh Najmoddin, Mohsen Mohammadi, Abdolali Fayyaz
A-10-1651-1	Synthesis of double and triple network hydrogels with excellent mechanical performance based on Polyacrylic acid/Sodium alginate/Agar	Sohrab Rahmani, Samira Jafari
A-10-1652-1	Synthesis of chemical and ionically dual cross-linked double network hydrogels based on oxidized sodium alginate and poly( acrylic acid-co-acrylamide)	Sohrab Rahmani, Shabnam Chargoli
A-10-1653-1	Synthesis of dynamic hydrogels based on Schiff reaction by using of chitosan and oxidized sodium alginate and improvement of its mechanical properties via incorporation of polyacrylamide and gelatine networks into its network	Sohrab Rahmani, Maryam Farzin
A-10-1309-2	Structure and crystallization of branched polylactic acid with peroxide and glycidyl methacrylate: The effect of different modification methods	Mona Jafari, Nadia Jalalifar, Babak Kaffashi
A-10-1658-1	Effects of substitution of Lysine to some other Amino Acids on Thermostability of proteins	Mohammad navid Mohabatkar, Hassan Mohabatkar



A-10-1675-1	Preparation and rheological characterization of PEBAX-IL/PES membrane for gas separation	Setareh Pishva, Doctor, Shadi Hassanajili,
A-10-69-4	Flow cytometry based detection of breast cancer cells with Antibody conjugated magnetic nanoparticle	Amir Hossein Haghighi, Zahra Faghih, Fatemeh Farjadian
A-10-1268-2	Effect of Althaea officinalis and Green Tea Extracts on the Bacterial Cellulose Production	Negar Honaramiz Fahim, Majid Montazer
A-10-1359-2	Preparation of Chop Polymeric Nanofibers Using Gelatin and Polycaprolactone	Sarah Karimi, Najmeh Najmoddin, Mohamad Pezeshki-Modaress
A-10-1668-1	Facile one-step protocol for Oxidation of Carrageenan	Taravat Khodaei, Jhamak Nourmohammadi, Azadeh Ghaee
A-10-1166-3	Evaluation the morphology and thermal behavior of Poly(lactic) acid/functionalized Graphene oxide foams produced via super critical Carbon dioxide	Mohammad Reza Kamrani, Amir Ramezannejad, Alireza Aghili, Katayoon Noorzadeh
A-10-1706-2	Novel polymeric wound dressing containing Artemisia annua L extract, suitable for the bacterial wounds	Fatemeh Sadat Mirbehbahani, Fatemeh Hejazi, Najmeh Najmoddin, Azadeh Asefnejad
A-10-1595-1	Development of a new bone scaffold for the treat of large bone defects	Keran Zhou, Zhi Cao, Fournet Margaret Brennan, Devine Declan
A-10-1168-5	Internally Plasticized PVC by Covalent Attachment of Tributyl Citrate	Hossein Abdollahi, Vahid Najafi, Ali Samadi
A-10-1575-1	Preparation of PEG-BSA Conjugate for Stabilization of Water-in-Water Emulsions	Raziye Marashi, Sareh Kheirie, Mohsen Ashjari
A-10-1734-1	Synthesis and Characterization of Supramolecular Dual-Crosslinked Self-Healing Hydrogel Based on Reversible Host-Guest Complexation	Zahra Mohamadnia, Masoumeh Mohammadhoseini
A-10-1730-1	Antibacterial Porous Membranes based on Imidazolium Ionic Liquids Bearing Different Alkyl Chains	Bahman Jafari, Davoud Afshar, Nasser Nikfarjam
A-10-1679-1	(Running head) In a Reverse Micellar System: A Parametric Study	Azam Dehghan, Saeed Ghanbarzadeh, Mohammad Imani
A-10-1756-1	Synthesis of xanthan gum / polymethacrylic acid semi-IPN hydrogels for drug delivery systems	Sanaz Aboudi, Mehdi Ghaffari, Mohsen Shahrusvand
A-10-96-4	Investigation of biodegradation behavior and mechanism, thermal degradation behavior and mechanical properties of biopolymers	Behnam davoudi, seyed sajjad Khosravi, Milad Jalilian
A-10-1783-1	Preparation and evaluation of morphology and swelling of wound dressings based on TPU / Chitosan and TPU / Nano-Chitosan	Seyed Mohammad Seyed Hosseini, Mohammad Taghi Khorasani
A-10-1715-1	Effect of pH on the extracted lignin weight and its functional groups from industrial waste black liquor	S. Ghane Gardeh, Elham S. Moosavi, Ramin Karimzadeh
A-10-530-1	Preparation of physically cross-linked gelatin porous microspheres	Parvin Shokrollahi, Fatemeh Shokrollahi, Mehran Ghasemi
A-10-1805-1	synthesis of inulin-Fe <sub>3</sub> O <sub>4</sub> nanocomposite using inulin biopolymer extracting from Jerusalem artichokes for the removal of heavy metals from aqueous solutions	Azam Amini Herab, Dariush Salari, Alireza Ostad Rahimi, Ali Olad
A-10-1805-2	isotherms, kinetics and thermodynamics studies of heavy metals removal using polymer nanocomposite inulin- iron oxide	Azam Amini Herab, Dariush Salari, Alireza Ostad Rahimi, Ali Olad
A-10-1361-3	Encapsulation of Pomegranate Seed Oil in the $\beta$ -Cyclodextrin: Synthesis, characterization and application on the cotton	Miss Fateme Sadat Miri, Mr Mousa Sadeghi-Kiakhani, Miss Elaheh Hashemi, Mr Madi Safi



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A-10-1361-4	Walnut green husks extract as the green antimicrobial natural dye on the wool treated by chitosan-nano ZnO	Mr Mousa Sadeghi-Kiakhani, Miss Elaheh Hashemi
A-10-1827-1	Fabrication and Characterization of Modified Chitosan-Coated Magnetic Nanoparticles for cancer therapy	Hamid Mirzadeh
A-10-1850-1	Effect of Isocyanate-Modified Cellulose on Structure and Properties of Silica Aerogel	Parisa Hakimi, Ahmadreza Bahramian
A-10-795-2	Morphological Investigation of Poly (Vinyle Alcohol)/Starch/Graphene Oxide Composite Nanofibrous Mats for Biomedical Application	N. Hosseini Darabi, M.R. Kalaei, S. Mazinani, R. Khajavi
A-10-1369-2	Surface modification of acrylic denture base to reduce the surface roughness and candida albicans adherence	Sobhan Shahsavari, Nadereh Golshan Ebrahimi

## *Adhesives, Paints, and Coatings*

A-10-1572-1	Polyurea applications in construction	Amirhosein Yazdanbakhsh
A-10-1613-1	Effect of hygrothermal weathering on the mechanical and dynamic mechanical properties of epoxy/glass fiber composites used for structural applications	Mohammadnabi Hesabi, Ian Major, Evert Fuenmayor, Declan Devine
A-10-1704-1	High temperature adhesives	Mahsa Javid, Fateme arabgol, Fateme Pashaei soorbaghi
A-10-1596-1	A bioadhesive film formulation as a potential transdermal drug delivery system: feasibility study based on examination of physical and mechanical properties	Fateme Etebari, Mohammad Khorram, Payam Setoodeh
A-10-1680-2	EVA Based Hot Melt Adhesive: PE Wax Versus Paraffin Wax	Shahrazad Rahmani, A. Dehghanian
A-10-1816-1	Effect of type of phenolic resin in preparation of an adhesive from phenol-formaldehyde resin	Mehri Dana, Mohammad Baraghoosh Baraghoosh, Saeid Asadi Shahidi, Payam Ganji, Gholam Hossein Zohuri
A-10-405-2	Toughness enhancement of epoxy nanocomposite coatings using clay nanosheets modified with silanized hyperbranched polyester amide	Atefeh Rahimzadeh, Alireza Azizi, Morteza Ganjaee, Hossein Yari

## *Polymer Rheology, Processing, and Technology Elastomers and Compounding Technologies*

### *Polymer Rheology, Processing, and Technology*

A-10-1300-3	Effects of Plasma and Ultraviolet-Ozone Treatments on Surface Properties of Polystyrene Culture Dishes	Sahar Afif, Morteza Nasiri, Farhang Abbasi
A-10-1552-1	The Impact of Nano Graphene Oxide on Rheological Properties of AM-co-AA Hydrogel as Drilling additive	Ahmad Rabiee, Fatemeh Salmani
A-10-1560-1	Effects of N-Methyl-2-pyrrolidone addition on gel developments of Graphene oxide/polyvinyl alcohol suspension under oscillatory shear	Asal Yousefi siavoshani, Hossein Nazokdast, Mr Hamid Garmabi, Mrs Fatemeh Mohammadzadeh
A-10-1585-1	Electrospinning low molecular weight alginate-based nanofibers	N.Negahdari, M.Saeed, M.Pezeshki-Modaress



A-10-1610-1	Investigation on the Convection Flow Effect on the Surface and Depth of the Evaporative Polymeric Solutions via PIV method	Sahar Farqarazi, Ali Abbasian
A-10-1655-1	The Study of Rheological Properties of the Most Applicable Polymers in Polymer Flooding of Oil Reservoirs	Ehsan Esmailnezhad, Maysam rajabi
A-10-1655-2	Rheological Properties Investigation of Polymer Solutions Regard to Concentration and Salinity for Enhanced Oil Recovery	Ehsan Esmailnezhad, Maysam Rajabi
A-10-1655-3	The Feasibility Study of Polymer Flooding in the High-Temperature Oil Reservoirs	Ehsan Esmailnezhad, Maysam rajabi
A-10-1612-1	The effect of nanoparticle addition on the mechanical properties of a thermoplastic coating	Morteza Ehsani, Hossein Ali Khonakdar-sangdehi, Farnoosh Hormozinezhad
A-10-219-3	Development of a dual-curable epoxy system for prepreg preparation	Hamidreza khalafi, Morteza Ehsani, Hossein Ali Khonakdar
A-10-1706-1	Fabrication of nanofibrous structure containing Artemisia annua L plant extract	Fatemeh Sadat Mirbehbahani, Fatemeh Hejazi, Najmeh Najmoddin, Azadeh Asefnejad
A-10-1757-1	Rheological study of silk fibroin	Elnaz Tamjid Shabestari, Afsaneh Ehsandoot
A-10-1778-1	The effect of different post-curing methods on hardness and swelling properties of stereolithography 3d printed parts	Zahra Shirband, Morteza Behzadnasab, Soheil Dariushi
A-10-1812-1	Low density EPDM foam in LCM line	Mehrnaz Rashidi, Farnaz Taherian
A-10-1838-1	Preparation and characterization of magnetic carbonyl iron suspension using Ni-Zn ferrite nanoparticles additive	Seyedeh Samaneh Ghasemi, Nadereh Gholshan Ebrahimi
A-10-1826-1	Redaction of the Doi and Ohta constitutive equation	T. Asadollahi, N. Golshan Ebrahimi

## *Elastomers and Compounding Technologies*

A-10-1542-1	The effect of graphite powders on the thermal conductivity of EPDM rubber and heat transfer in its composite	Mahdi Zarinjooy Alvar, Zahra Farhang, Ahmad Reza Bahramian
A-10-1047-4	Dynamic rheological study on nitrile butadiene rubber reinforced with different levels of nanographene	Mohammad Barghamadi, Mohammad Karrabi, Mir Hamid Reza Ghoreishy, Somayyeh Mohammadian
A-10-1047-5	Investigation of the relaxation properties of nitrile rubber/ graphene nanocomposites containing different acrylonitrile content	Mohammad Barghamadi, Mohammad Karrabi, Mir Hamid Reza Ghoreishy, Somayyeh Mohammadian
A-10-1564-1	Effect of devulcanized rubber on properties of EPDM rubber	Atefeh Salimi, Foroud Abbassi Sourki, Mirhamidreza Ghoreishy, Mohammad Karrabi
A-10-26-1	Effect of Calcium Oxide on the Properties of Compounds based on General Purpose Rubbers	Fatemeh Khodkar, Mojraaba Khoshmanzar
A-10-266-3	Effect of halloysite nanotube and acrylonitrile butadiene rubber elastomer on the tensile strength of PVC/NBR/HNT nanocomposite	Sohrab Payravi, Mohammad Reza Nakhaei, Pedram Safarpour, Ghasem Naderi
A-10-124-2	Tearing Energy Methodology in Rubber Fatigue and Crack Growth Studies: A Short Assesment for Rubber Compounding	Mehdi Shiva
A-10-1754-1	Effect of Silica on Filler Dispersion and Networking in Carbon black Filled Styrene-butadiene Rubber Compound	Arshia Amrollahi, Seyed Mostaffa Hosseini, Mehdi Razzaghi-Kashani
A-10-1759-1	The role of Hybrid Fillers in Vulcanization of Styrene-Butadiene Rubber(SBR) Compounds	N. Habibi, M. Razzaghi-Kashani
A-10-1793-1	Mechanisms behind the Change of Vulcanization Kinetics of Silica Filled Maleated Natural Rubber	Mahan Ghorashi, Seyed Mostaffa Hosseini, Mohammad Alimardani, Iman Abbasi Shahdehi
A-10-1825-1	Effect of Graphene Concentration on the Curing and Mechanical Properties of Chlorobutyl Rubber Nanocomposites	Marziye Sharifi-Teshnizi, Azam Jalali-Arani, Marianella Hernández Santana
A-10-1840-1	On The Role of Reinforcing Fillers in The Vulcanization Mechanism of Styrene-butadiene Rubber	Seyed Mostaffa Hosseini, Mehdi Razzaghi-Kashani
A-10-1841-1	Evaluation the transport properties of the natural rubber as polymer gels and investigating the effect of the network heterogeneity	Mohammad Layeghi, Mohammad Reza Pourhossaini, Mahmoud Razavizadeh, Mohammad Khabiri, Milad Saadat Tagharoodi

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A-10-1821-1	Effect of Silane Chain Length on The Filler-Polymer Interaction in Silica Filled Polydimethylsiloxane	Peyman Hosseini-Far, Mehdi Razzaghi-Kashani, Mohammad-Hossein Navid Famili
A-10-1603-1	Investigating the impact of aromatic content of process oils on the frictional properties of tire tread compound	Iman Abbasi Shahdehi, Mohammad Alimardani, Mehdi Razzaghi-Kashani, Hossein Roshanaei, Mahan Ghorashi
A-10-1602-1	Reinforcing efficiency and compatibilizing effect of nanosilica for ethylene-propylene diene monomer/chloroprene rubber blends	Zahra Eslami, Miraidin Mirzapour
A-10-1842-1	Effect of Silica/Rubber Interface on Tribological Behavior of Filled Styrene-butadiene Rubber Vulcanizates	Nafise Torbati-Fard, Seyed Mostaffa Hosseini, Mehdi Razzaghi-Kashani, Mir Hamid Reza Ghoreishy

## Polymer Nanocomposites, Blends and Alloys

### Polymer Nanocomposites, Blends and Alloys

A-10-1001-1	Mechanical and Shape Memory Properties of Thermoplastic Polyurethane Nanocomposites Containing Solo- and Hybrid-Based Silicate Nanofillers	Arian Amirkiai, Gity Mir Mohamad Sadeghi, Hossein Nazockdast
A-10-1471-1	Polymorphism Investigation of Montmorillonite-Incorporated Thermoplastic Polyurethane Nanocomposites	Arian Amirkiai, Mahbod Abrisham, Parham Dehghan, Hossein Nazockdast
A-10-1044-4	The Effect of Functionalization of Halloysite Nanotubes with Iron Oxide on the Morphology and Mechanical Properties of Polyurethane	Fatemeh Mohammadzadeh, Vahid Haddadi-Asl, Iman Sahebi Jouybari, Asal Yousefi Siavoshani
A-10-1569-1	Fabrication of Graphene Nanoplatelet -based PMMA/PEO Nanocomposites with Enhanced Mechanical, Thermal and Electrical Properties	Elham Aram, Morteza Ehsani, hossein ali khonakdar
A-10-236-3	Fe <sub>3</sub> O <sub>4</sub> nanocomposite hydrogel for drug delivery application	Rajabali Ebrahimi, Marziyeh Pakniyat
A-10-1598-1	Photocurable and injectable nanocomposite based on polyvinylpyrrolidone/triethylene glycol/POSS	Sara Pirani, Naimeh Bahri-Laleh, Sahar Banyaghoob, Seyed Amin Mirmohammadi
A-10-81-2	Shape memory behavior of dynamically vulcanized thermoplastic elastomers based on PLA/EVA blend in presence of nanoparticles	Pardis Lohrasbi, Jafar Khademzadeh Yeganeh, Mohsen Najafi
A-10-1542-2	Effect of graphite and oxidation process on the paraffin wax content and its leakage in the phase change material system prepared by swelling method	Mahdi Zarinjooy Alvar, Ahmadreza bahramian
A-10-1637-1	Microwave-Assisted Nanocellular Foaming of TPU/MWCNT Nanocomposite	Mohammad Aghvami Panah, Mehrnaz Shahbazi, Seyyed Reza Ghaffarian anbaran
A-10-1629-1	hydrogel nanocomposite based on acryloyl tetra ammonium thiacalix[4]arene for removal of cationic dye	Mahvash Niknezhad, Moslem Ansour lakouraj
A-10-1617-1	A brief reserch on natural polymer / graphene composites	Tayebeh Behzad, Elham Mansoori
A-10-1638-1	Rubber toughening of poly amide-6 with functionalized styrene butadiene rubber	Minoo Boroojerdi
A-10-1693-1	Stabilizing Effect of Dicyclohexyl Phthalate on Low Dose Gamma Irradiated Polycarbonate	Farah Khoylou, Azam Akhavan, Vajihe Nikfarjam, Nasrin Sheikh
A-10-1654-1	Nanocomposite Polyelectrolyte Membranes Based on Sulfonated Aromatic Polymers for Fuel Cell Applications	Kosar Arab, Mohadeseh Montahayie, Mahdi Tohidian
A-10-1657-1	Piezoelectric Properties of Gamma Radiation Crosslinked PVP/PEG/Barium Titanate Nanocomposite Hydrogel	Hamed Ghaedrahmati, Masoud Frounchi
A-10-355-1	Experimental and theoretical investigations of Tensile behavior of Carboxylated nitrile butadiene rubber /Epoxy/ Halloysite nanotubes Nanocomposites	Seyed Mohamad Reza Paran, Ghasem Naderi
A-10-1625-2	Lubricating effect in phase coarsening of PE/PCL/PEO tri-continuous polymer blend	Mehdi Haji Abdolrasouli, Ebrahim Jalali Dil, Jamshid Khorshidi Mal Ahmadi
A-10-1669-1	Radiation preparation of nanomagnetic hydrogel based on semi-IPN system	Nasrin Sheikh, Zahra Rafiei-Sarmazdeh



A-10-1176-2	Tensile Properties and Stress Whitening of Polypropylene Modified with Elastomers	Mohammad Farmahini Farahani, Reza Bagheri
A-10-1176-3	Stress Whitening Resistance of Polypropylene-Rubber Compounds in Impact Tests	Mohammad Farmahini Farahani, Reza Bagheri
A-10-1656-1	Effect of adding multi-walled carbon nanotubes on the tensile and compression properties of epoxy resin	Mehdi Maktabi, Razi Sahraeian, Soheil Dariushi
A-10-1681-2	The effect of clay intercalation/exfoliation state in thermoplastic polyurethane/clay nanocomposites on the transport behavior of solvent	Amir Hossein Manzari shahrjerdi, Mohammad Khabiri, Milad Saadat Tagharoodi, mahmoud Razavizadeh, Mohammad Reza Pourhossaini
A-10-1682-1	Effect of multiwall carbon nanotube on the mechanical and dynamic mechanical properties of foams based on POE/COC blends with co-continuous morphology	Mehran Saadatmand, Hamed Azizi, Saied Ahmadjo
A-10-1682-2	Effect of multiwall carbon nanotube on the cell morphology and rheological properties of POE/COC blend foams with co-continuous morphology	Mehran Saadatmand, Hamed Azizi, Saied Ahmadjo
A-10-1688-1	Integration of polylactic acid/ polycaprolactone-halloysite nanotubes (PLA/PCL-HNT) nanocomposite for biodegradable stents	Chaitra Venkatesh, Ian Major, John Lyons, Declan Devine
A-10-355-2	Curing behavior and mechanical properties of Ethylene-propylene diene monomer /Nitrile butadiene rubber/ Halloysite nanotubes Nanocomposites	Seyed Mohamad Reza Paran, Ghasem Naderi, Msc Moslem Mirzaee, Mir Hamid Reza Ghoreishy
A-10-1700-1	Investigating the physical and mechanical properties of starch/nanocellulose nanocomposites	Niloofer Hosseinvand, Niloofer Eslahi, Ali Abbasian
A-10-1648-1	Reinforced natural polymeric scaffold using modified glass-flake nanoparticles	Zahra Dezfouli, Mojdeh Mohseni
A-10-1689-1	Synthesis and Preliminary Evaluation of New Phosphorous-Containing Flame-Retardant Hardeners for Epoxy Resin	Jamshid Kamalipour, Mohammad Hosain Beheshty, Mohammad Jalal Zohuriaan Mehr
A-10-1707-1	Functionalization of Styrene-Ethylene-Butylene-Styrene (SEBS) by melt free radical grafting of Glycidyl Methacrylate (GMA) and study of mechanical properties of Nylon 6 /SEBS-g-GMA blend	A. Alami, A. Arefazar
A-10-1618-2	The Effect of CTBN Rubber on Epoxy Resin properties	Ali Reza Banan, Ali Ebaidirad, Yahya Ebrahimabadi
A-10-1698-1	Abrasion and thermal resistant SiO <sub>2</sub> /ZrO <sub>2</sub> /epoxy nanocoating on epoxy/glass substrate	S. Abbasalizadeh, Kh. A. Nekouee, M. H. Alaei, H. Fattahi
A-10-1309-3	Effect of dehydration method on the rheological properties of Polylactic acid/Halloysite nanotube composites	Nadia Jalalifar, Mona Jafari, Babak Kaffashi
A-10-1549-1	The Effect of Linear Low Density Polyethylene on Strain Hardening Modulus of Bimodal High Density Polyethylene Pipe Grade	Ghodratollah Hashemi Motlagh, Farnaz Ebrahimi
A-10-1660-2	Graphene Oxide Reinforced Nanocomposite Made from PS-PMMA Core-Shell Fibers	Zahra Khoubi-Arani, Shahrzad Rahmani
A-10-1729-1	A Review on PLA Nanocomposites reinforced with CNT: Characterization and Properties	Amin Kamkar, Ehsan Vahabi Agha Babae
A-10-1711-1	Fabrication and characterization of oxidized starch nanoparticle as a carrier for target delivery of vancomycin	Elnaz Bahaghighat, Jhamak Nourmohammadi, Fatemeh Jafari
A-10-1733-1	Recycled Polyethylene terephthalate modified bitumen: physical and morphological properties	Fakhraddin Alimoradi, AliReza Khaloo, Morteza Faghihi
A-10-1736-1	Novel bilayer PVDF/gelatin nanostructure for the regeneration of damaged retina	Bitam Amouzadeh, Fatemeh Hejazi, Seyyed Mahdi Saeed, Azadeh Asefnejad, Asma Motamedi
A-10-1741-1	hydrogel base on chitosan recyclable ion exchanger for efficient removal of chromate and nitrate from water: Synthesis, characterization and application in membrane	Maryam Shojaipour, Mousa Ghaemy, Jalal Barzin
A-10-266-2	Investigation of impact strength of nanocomposites based on PVC/NBR/Graphene	Amir hosein Hamdolazadeh, Mohammad reza Nakhaei, Roholah Sarfaraz, Ghasem Naderi
A-10-1620-2	Mechanical Properties of PP/PBR TPV in-situ Compatibilized by MAA and Zn <sub>2</sub> /Al Layer Double Hydroxide	Reza Darvishi, Ali Moshkriz
A-10-1738-1	Biodegradable poly (lactic acid)-WPI blends containing Nanoclay for food packaging films with gas barrier properties	Farshid Ahmadi, Hamid Ahmadi, Zahed Ahmadi, Azizeh Javadi, Hossein Nazokdast
A-10-1671-1	Preparation of MWCNT/Ba <sub>0.2</sub> Sr <sub>0.2</sub> La <sub>0.6</sub> MnO <sub>3</sub> /PANI nanocomposites and investigation of its electromagnetic properties in KU-band	Seyed Hossein Hosseini, Reza Paymanfar, Tooba Afshari, Sama Sadat Hosseini



A-10-1581-1	Synthesis of polyamide-imide and investigation of the interpenetrating network created by its interaction with epoxy resin	Armin Amini Majd, Amir Reza Pouladvand, Iraj Amiri Amraei, Mehrzad Mortezaei
A-10-1581-2	improving the mechanical properties of epoxy resin and glass-fiber-reinforced epoxy composite by polyamide-imide	Armin Amini Majd, Amir Reza Pouladvand, Iraj Amiri Amraei, Mehrzad Mortezaei
A-10-266-4	Effect of process parameters on mechanical properties PA6/NBR/Clay nanocomposites fabricated by Friction stir process	Ali Ghorbankhan, Mohammadreza Nakhaei, Ghasem Naderi
A-10-1581-3	Investigation of the changes in thermal properties of epoxy resin by reaction with the polyamide-imide reactive modifier	Armin Amini Majd, Amir Reza Pouladvand, Iraj Amiri Amraei, Mehrzad Mortezaei
A-10-1660-3	Thermal Annealing Effect on the CRR Size of a Phase-Separated Soft Polymer Nanocomposite	Zahra Khoubi-Arani, Naser Mohammadi
A-10-1696-1	Preparation of Cs <sub>0.2</sub> WO <sub>2.7</sub> /polypyrrole nanocomposite and investigation of its UV-Visible and near infrared shielding effect	A. Azimi, S. Hossein Hosseini
A-10-1763-1	MWCNTs reduces the diameter of electrospun PVDF nanofiber	Mehrdad Kokabi, Seyedeh Negar Samadi Jirdehi, Narges Pishehvar
A-10-1764-1	The effect of MWCNTs on electrospun PVA nanofiber diameter	Mehrdad Kokabi, Narges Pishehvar, Negar Samadi
A-10-1767-1	Aqueous Electrospinning of Carboxymethyl Chitosan/Polyethylene Oxide Nanofibers	Shadab Bagheri, Hamid Mirzadeh, Ahmad Reza Moradi
A-10-1669-2	Application of nanomagnetic hydrogel prepared by gamma radiation in cleaning old oil paintings	Nasrin Sheikh, Zahra Rafiei-Sarmazdeh
A-10-1777-1	Solvent-free template synthesis of superparamagnetic Fe <sub>3</sub> O <sub>4</sub> @PANI nanocomposite as an electron transport layer in polymer solar cells	Fatemeh Sadegh, Ali Reza Modarresi-Alam
A-10-1787-1	An Investigation on Flexural Properties of 3D Printed Composites	Naghmeh Raghbati, Nastaran Mosleh, Soheil Dariushi, Masoud Esfandeh
A-10-1541-1	The effect of nano-silica on the paraffin wax heat of fusion for thermal energy storage system applications	Zahra Farhang, Mahdi Zarinjooy, Ahmadreza Bahramian
A-10-96-2	Investigation of mechanical properties and flammability of PC/ABS blend with different compatibilizers	Farzaneh Mostaani, Seysd Sajjad Khosravi, Milad Jalilian
A-10-1782-1	Effect of Nanosilica Hydrophilicity on Swelling and Dynamic Mechanical Properties of Thermoplastic Polyurethane Elastomers	Javad Rezaali, Mahmoud Razavizadeh, Mohammad Reza Pourhossaini, Mohammad Khabiri, Milad Saadat Tagharoodi
A-10-1776-2	Investigation on the mechanical properties of Polybutylene succinate/graphene oxide-xanthan gum nanocomposite	Azade Kafashan, Amir Babaei
A-10-1810-1	Preparation of flexible zeolite nanocomposite fibers by electrospinning process	F. Haghdooost, S. Hajir Bahrami. J. Barzin, A. Ghaee
A-10-1815-1	Synthesis of Dental Nanocomposites Based on Polymethyl Methacrylate and Periodic Mesoporous Organosilica (PMO) Nanoparticles	Zohreh bahrami, Hassan Abdoos, Mahdi Khorsand Riabi
A-10-1093-1	Experimental Study of Toughening Mechanisms in Poly (lactic acid)/ Poly Chloroprene based blends	Zahra Shahroodi, Amir Abedi, AliAsghar Katbab
A-10-1819-1	Effect of Dynamic Vulcanization on the molecular weight of Blends Based on Polylactide and Acrylonitrile Butadiene Rubber	Mahshid Maroufkhani, Ali Asghar Katbab, Hasti Bizhani
A-10-497-1	Modification and application of novel methyl methacrylate-butadiene-styrene (MBS) impact modifier in Nylon 6	Hamid Salehi-Mobarakeh, Shadi Avaz Abadian, Alireza Mahdavian
A-10-1822-1	PEBAX/COF Mixed Matrix Membranes for CO <sub>2</sub> Separation	Morteza Sadeghi, Arjomand Mehrabani-Zeinabad, Shiva Zolfaghari
A-10-1823-1	Preparation of bio-nano composite hydrogels of gum tragacanth and halloysite nanoparticles by electron beam irradiation	Maryam Dehghan-Niri, Ebrahim Vasheghani-Farahani, Mohamadreza Baghaban Eslaminejad, Moslem Tavakol, Fatemeh Bagheri
A-10-1795-1	Production and investigation of nanofiber properties of polyether sulfone membranes with graphene oxide(PESGO)	N.Ghafarzadeh, M.Abbasi
A-10-324-1	The change of morphology of in-Situ prepared PE/MMT nanocomposite by different procedures of modification of Na-MMT	Shokoufeh Hakim, Ali Alikhani, Mehdi Nekoomanesh
A-10-324-2	Effect of NH <sub>3</sub> /Methylaluminoxane/Dodecylamine modified-Nanoclay on the Properties of Polyethylene/Clay Nanocomposites Prepared by in-Situ Polymerization	Shokoufeh Hakim, Ali Alikhani, Mehdi Nekoomanesh
A-10-1836-1	Mechanical properties and surface hydrophobicity improvement of high-density polyethylene by silica-nanoparticles	Jalil Morshedian, Sedighe Sepahbod-Bakhshaiesh

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A-10-1817-1	physical improvement of the polyester-based nanocomposites	Morteza Ehsani, Pegah Farazande
A-10-1835-1	Structural analysis of the curing of off-stoichiometric epoxy-DICY system	Sogand Jafary, Morteza Mortezaee
A-10-1341-3	Morphology and antibacterial properties of Unplasticized polyvinyl chloride	Adel Soleimani, Farhid farahmandghavi, Jalil Morshedian
A-10-619-3	Morphological study of polylactic acid and polybutylene succinate blends	Zahra Yousefi, Mohsen Mohammadi
A-10-619-4	Wide-angle X-ray diffraction scrutiny of polyolefin blends blown films	Mohsen Mohammadi, Alireza Azizi
A-10-1776-3	Investigation on the mechanical properties of polylactic acid/chitosan nanocomposites	Leyli Moradi, Pooria Hoseinzadeh, Mehrasa Amiri, Azade Kafashan
A-10-1843-1	Effect of Calcium Carbonate Characteristics on the Mechanical Properties of PP/CaCO <sub>3</sub> Composites	Hadi Sobhani, Tayebeh Pirhayati, Shirin Mohammadi Ali abadi, Mohammad Mahdi Khorasani
A-10-1600-1	Functionalized chitin nanowhiskers for application in direct methanol fuel cell membranes	Mojtaba Nasirinezhad, Seyed Reza Ghaffarian, Mahdi Tohidian
A-10-1846-1	The Effects of ZnO Nanoparticles and Stearic acid Compatibilizer on the Antibacterial Properties of Polypropylene	Nooshin Abzan, Abbas Fatehi
A-10-1795-2	Production and investigation of nanofiber properties of polyether sulfone membranes with graphene oxide(PESGO)	N.Ghafarzadeh, M. Abbasi
A-10-1848-1	Preparation of hard PVC and POE grafted with maleic anhydride blends strength and toughness	Najmeh Alizadeh, Ardeshir Saeidi, Esmail Ghasemi
A-10-1855-1	Manufacturing of antibacterial polyethylene tanks using oxide and metal nanomaterials	Ali Abbaszadeh, Alireza Abdoljavadi, Hosein Teymoori Tafazol, Mehdi Eskandari
A-10-1853-1	Influence of crystalline structure on tensile properties of LLPE/HDPE blends	Hadi Sobhani, Parviz Mousavi
A-10-1800-1	Preparation and evaluation of thermal properties and flame resistance of epoxy/graphene oxide/POSS nanocomposites	Ida Alavi, Majid Karimi, Gholam ali Kohmareh, Mohammad Reza Abbasi
A-10-1749-1	A Study in Dispersion of Glycidyl POSS-modified silica nanoparticles in epoxy	Mohammad Saleh Bordbar, Ali Salimi, Majid Karimi
A-10-236-2	Sonochemical synthesis and swelling of Fe <sub>3</sub> O <sub>4</sub> nanocomposite hydrogel	R. Ebrahimi, N. Rahmani
A-10-1696-2	Synthesis some of conducting and magnetic nanostructures materials based polypyrrole nanocomposite as multiband microwave absorber	A. Azimi, S. Hossein Hosseini

## Simulation and Modeling of Polymeric Systems Nano, Smart, and Electronic Polymer System

### Simulation and Modeling of Polymeric Systems

A-10-1544-1	Poly(2-oxazoline)/Graphene Interface Revealed by Molecular Dynamics	Ahmad Asadinezhad
A-10-1579-1	Modeling and parametric optimization of an epoxy resin-based microwave absorbing composite	Abbas Khademabolfazl, Sajjad Nazemzadeh
A-10-1582-1	Simulation of injection molding process of a plastic toy using Mold Flow software	Sajede Aghasi, Amirhosein Yazdanbakhsh



A-10-1660-1	Modification of Compressible Regular Solution (CRS) Model Based on Sanchez-Lacombe Lattice Fluid EoS for Describing LCST Phase Behaviors	Zahra Khoubi-Arani
A-10-1643-1	Minimization of phase separation velocity in aqueous two-phase systems containing dextran and polyethylene glycol	Maryam barati, Mohsen ashjari
A-10-1731-1	Evaluating the mechanical response of TPMS-based polymeric scaffolds based on additive manufacturing method using experimental tests	Mohammad Nikkhoo
A-10-1643-2	The determination of Tie-line fields and critical points for coexisting polyethylene glycol and dextran aqueous system based on chromatographic data: a phase separation modeling	Maryam Barati, Mohsen Ashjari
A-10-1620-3	Non-isothermal Emulsion Ter-polymerization of Maleic Anhydride, Butyl Methacrylate and 3,5-dihydroxy-4-isopropyle trans-stilbene:	Ghasem Payam, Reza Darvishi, Ali Moshkriz
A-10-1774-1	Control of solvent evaporation in the process of phenolic preregs Production	Mehrzad Mortezaei, Mohammad Oveisi
A-10-574-2	Adsorption of a Silyl Ester Donor on Magnesium Chloride Support of Heterogeneous Ziegler-Natta Catalysts: Influence of Alkyl Substituents	Mehdi Ghambarian, Hassan Arabi, Mohammad Ghashghaee
A-10-574-3	Isoconversional Non-Isothermal Kinetic Modeling of Linear Low-Density Polyethylene (LLDPE) Pyrolysis over USY Catalyst	Ali Sharifi, Mohammad Ghashghaee
A-10-1263-3	Preparation of Zein-Curcumin Nanoparticles for the treatment of Skin Wounds	Yasaman Nazani, Shadab Bagheri, Hamid Mirzadeh

## *Nano, Smart, and Electronic Polymer System*

A-10-1597-1	An overview of the radiation-protective properties of nanocomposites containing Iron Oxide and High Density Polyethylene in the presence of X- and Gamma-rays	Monireh Keshavarzi, Shahryar Malekie, Seyed Mohammad Amin Hosseini
A-10-1570-1	Fabrication of a Strain Sensor Based on Polyurethane/Silver Nanowires Nanocomposite for Medical Applications	Pegah Hashemi, Milad Mehranpour, Ismaeil Ghasemi
A-10-1109-2	The effect of heating/cooling rate on the phase transition temperature of amorphous shape memory polymer nanocomposite	Ghazaleh Alamdarnejad, Mehrdad Kokabi
A-10-1616-1	Evaluation of dosimetry response of nano Graphene Oxide to gamma-rays and electron beam using noninvasive Raman spectroscopy	Shahryar Malekie, Mohammad Amin Hosseini, Nesa Ebrahimi, Ahmad Reza Vatankhah,
A-10-1558-1	Hydrogenation of PAO type Lubricants Using A New Pd Immobilized on Functionized Halloysite catalyst	Mahtab Tabrizi, Samahe Sadjadi, Naeimeh Bahri-laleh, Mehdi Nekoomanesh
A-10-1631-1	Polymeric nanoparticles synthesis based on emulsification solvent evaporation as a smart drug delivery system for Quercetin delivery as a candidate of pulmonary fibrosis treatment	Fatemeh Aghanasiri, Mojdeh Mohseni, Seyed Ali Javad Mousavi, Mohamad Pezeshki Modares, Bitra Mehravi,
A-10-1168-4	Multifunctional Piezoelectric & Microwave Absorbing Nanocomposites	Ali Samadi, Hossein Abdollahi
A-10-1650-1	Competition between the slow cooling and diluent presence to control poly(3-hexylthiophene) crystallization	Mina Alizadehaghdam, Farhang Abbasi
A-10-1631-2	Modified chitosan-alginate nanoparticles as a candidate for efficient ocular drug delivery	yeganeh Shojaei, Mojdeh Mohseni, Bitra mehravi
A-10-1186-2	Characterization of Magnetic-polymer-thick film filled with synthesized Fe <sub>3</sub> O <sub>4</sub> nanoparticles	Nermin Janem, Zahra Sadat Azizi, Mohammad Mahdi Tehranchi, Saed Pourmahdian
A-10-1648-2	Targeted nano-piezoelectric based with the aim of controlled Topiramate release for the treatment of epilepsy	Farhan Delavar, Mojdeh Mohseni
A-10-1565-1	Ropivacaine loaded PLGA microspheres via electrospray for postoperative pain management	Milad Jafari Nodoushan, Mona Golmirzaei
A-10-236-4	Swelling behavior of poly(acrylamide-co-acrylic acid) hydrogel	Rajabali Ebrahimi
A-10-1716-1	Synergic effect of Honey and tetracycline on Electrospun PCL wound dressing	Hossein Soleimani, Mahdi Saeed , Milad Jafari Nodushan



A-10-1717-1	Fast, easy, light, safe and high quality neutron shielding preparation using nanofiber polyaniline in presence its different dopants	Hossein Hosseini, Sama Hosseini, Morvarid Kiamarzi
A-10-1024-1	Gel Fraction Adjustment in Polyvinyl Alcohol-Copper Hydrogel to Achieve the Maximum Modulus	Z. Mohsenian, M. Kokabi
A-10-1650-2	Towards higher ordered crystals in the isothermal crystallization process	Mina Alizadehaghdam
A-10-1650-3	Successive melting and crystallization changes the crystalline behaviour	Mina Alizadehaghdam
A-10-1650-4	Thicker crystals with lower stability formed during a rapid crystallization	Mina Alizadehaghdam
A-10-1156-5	Approach of Liquid Crystalline Elastomers in Tissue Engineered Scaffolds	Mahshid Fallah-Darrehchi, Payam Zahedi
A-10-1567-1	Copper-containing polyurethanes and study of their dielectric properties	Pouya Gharibi, Mohammad hossein Navid Famili
A-10-1060-2	Production and evaluation of hybrid hydrophilic / hydrophobic membranes for membrane distillation process	E. Yousefi, M. Karimi
A-10-1789-1	Preparation of Ethyl 2-cyanoacrylate/PMMA core-sheath mesocapsules via electrospray process for self-healing biomedical purposes	Alireza Aminoroaya, Saied Nouri Khorasani, Rouhollah Bagheri, Zahra Talebi, Rasoul Esmaeely Neisiany
A-10-1776-1	Enhancing the bio-safety of graphene oxide by exploiting Xanthan gum biopolymer	Azade Kafashan, Amir Babaei
A-10-1402-2	Filtration azoic dyes of wastewater with nanofibers membrane PA6/3D fabric	Mohammad Nouri taba, Nader Ghobadi, Ali Hosseini Moradi
A-10-1752-1	Nanofiber and its role in Prevention of delamination	Mahya Bayat, Mehrzad Mortezaei
A-10-1587-1	Preparation and characterization of cellulose nanocrystals from cotton fiber	M. Akbari Hajjataloo, M. Abdollahi
A-10-1263-2	Study of the photocrosslinking kinetic of Poly(ethylene glycol) diacrylate (PEGDA) containing Methacrylated-POSS nanoparticles	Shadab Bagheri, Alireza Keyhazadeh, Seyed Reza Ghafarian, Majid Karimi, Mohammad Atai
A-10-1156-6	Preparation and Characterization of Poly (Lactic Acid)/Natural Rubber Blends As a Shape Memory Thermoplastic	Abbas Barzegar, Payam Zahedi, Foroud Abbassi-Sourki, Ali Malekzadeh
A-10-1830-1	Electrocatalytic Reduction of CO <sub>2</sub> Using Cu/CNT/PPSU nanofibrous Gas Diffusion Electrode	Parisa Mirzaei, Hajir Bahrami, Navid Noormohammadi, Abdollah Gholami Akerdi
A-10-1352-5	Investigation of the optical properties of nano-fibrillar chitosan-ZnO nanohybrid	Rozgol Bonsaleh, Amir Babaei, Alireza Shakeri
A-10-1352-6	Reducing cytotoxicity of ZnO-NPs by nano-fibrillar chitosan: Effect of concentration	Sahar Shafigh, Amir Babaei, Alireza Goudarzi, Zahra Arab-Bafrani
A-10-1852-1	Synthesis and Characterization of Electrochromic Sensor Based on Aniline Pentamer	Moein Rezaee Zangeneh, Ali Aghajani, Behzad Pourbadiei, Ali Pourjavadi

## Polymer Synthesis and Polymerization

<i>Polymer Synthesis and Polymerization</i>		
A-10-1168-2	Determination of monomer sequence distribution and thermal properties of poly (GMA-co-MMA) copolymers	Hossein Abdollahi, Ali Samadi
A-10-1168-3	Solution free radical Copolymerization of glycidyl methacrylate and methyl methacrylate: monomer reactivity ratios	Hossein Abdollahi
A-10-1639-2	Design and Preparation of organometallic polymers containing bithiazole rings	Akram Hosseini
A-10-1574-1	The Comonomer and Hydrogen Effect of the Second-Step Polymerization on Polyethylene Properties	Ehsan Nikzinat, Mohammad Hossein Jandaghian, Abdulhannan Sepahi, Reza Rashedi, Kamal Afzali
A-10-1670-1	Effect of Type of Catalyst on Functionalization of Poly 1-Hexene With Maleic Anhydride	Mohammad Reza Zamani, Saeed Ahmadjo, Mohammad Mahdi Mortazavi, Mohammad Reza





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A-10-1155-3	Group IV DiamineBis(phenolate) Catalysts for 1-Decene Oligomerization	Ahad Hanifpour, Naeimeh Bahri-Laleh, Mehdi Nekoomanesh-Haghigh
A-10-1647-1	Pd immobilized on Polymer network-halloysite nanocomposite as a useful catalyst for PAO hydrofinishing	Sahar Karimi, Mehdi Nekoomanesh, Samahe Sadjadi, Naeimeh Bahri-Laleh
A-10-1156-4	Synthesis and characterization of poly (4-vinylpyridine) as a zwitterionic polymer	Ali Malekzadeh, Payam Zahedi, Majid Abdouss, Alireza Khatibi
A-10-1641-1	Morphology-Activity Relationship of MgCl <sub>2</sub> -Based Ziegler-Natta Catalysts	Mohammad Hossein Jandaghian, Abdol Hannan Sepahi, Reza Rashedi, Kamal Afzali, Ehsan Nikzinat, Raziieh Davand, Maryam Masouri
A-10-1662-1	Thermal Stabilization of Polyoxymethylene by copolymerization: Examining the Effects of the catalyst and retardant	Shervin Ahmadi, Hedieh Jashni, HasanAgha Arabi, Saeed Dolatshah
A-10-1628-1	Effects of Azobisisobutyronitrile and Benzoyl Peroxide as Initiators on the Synthesis of Acrylic Resins via Solution Polymerization	Kimia Moghaddari, Navid Ramezani
A-10-1628-2	Study the effects of solvent content and initiator concentration on viscosity and solid content of acrylic resins	Kimia Moghaddari, Navid Ramezani
A-10-1300-4	Polymerization of acrylamide with N-vinylpyrrolidone and investigating its thermal stability in saline solution	Ali Najafpour, Morteza Nasiri, Farhang Abbasi
A-10-50-2	Investigation of outgassing, mechanical, and electrical properties of electrical insulation-based polyurethane	Medi Goleiz, Hajar Es-haghi, Mohamad javad babaei, Mohamad taghi khani, Tohid Faraj por
A-10-370-4	Preparation of graphene oxide - polystyrene nanocomposites by in situ emulsion polymerization	Mohsen Najafi, Jafar Khademzadeh Yeganeh
A-10-1640-1	Fabrication Conductive Fiber by Crosslinking Polyanilin with Glutaraldehyde	S. Amiri, M. Lari, S. Talebi
A-10-1300-5	Thermoresponsive copolymers on the basis of acrylamide with upper critical solution temperature in water	Kave Sharifiyan, Morteza Nasiri
A-10-1732-1	Preparation of WO <sub>3</sub> /MnFe <sub>3</sub> O <sub>4</sub> /polyaniline nanocomposites as thermal infrared and microwave multi-absorber	M. B. Doulabi, S. S. Hosseini, S. H. Hosseini
A-10-89-2	Kinetic of higher $\alpha$ -olefins oligomerization using Cp <sub>2</sub> ZrCl <sub>2</sub> and Cp <sub>2</sub> HfCl <sub>2</sub> metallocene catalysts	Ahad Hanifpour, Mahdi Hashemzadeh Gargari, Zahra Kalantari, Naeimeh Bahri-Laleh
A-10-1703-1	An Effective Rout for Preparation of Poly Methyl Methacrylate (PMMA)/ Silica Nanocomposites via two Initiators	Z. F. A. Mortazavi
A-10-1226-2	Fractionation of Oligo(1-decene) oil synthesized via AlCl <sub>3</sub> /H <sub>2</sub> O system	Amene Rahbar, Naeimeh bahri-laleh, Mehdi Nekoomanesh
A-10-540-1	Synthesis of poly (N-isopropyl acrylamide)	Ebrahim Hosseinalvand, Mohammadtaghi khorasani
A-10-1785-1	Investigation of cobalt-mediated radical polymerization of vinyl acetate with cobalt(II)naphthenate	Arash Mohammad Yari, Mohammad Ali Semsarzadeh
A-10-1794-1	Synthesis of poly(acrylamide-aniline) hydrogel with semi-interpenetrating network's structure	Mahsa Hatami, Saeed Pourmahdian, Ezeddin Mohajerani, Reza Taheri Ghahirizjan
A-10-397-4	Synthesis and characterization of anionic polymerized polystyrene	Mohammad Reza Jozaghkar, Farshid Ziaee
A-10-397-5	Effect of molecular weight on the thermal behavior of anionic polymerized polystyrene	Mr mohammad reza jozaghkar, Dr farshid ziaee
A-10-1783-2	Synthesis and characterization of core-shell silica-encapsulated polystyrene nanocomposite latex via in-situ emulsion polymerization	Seyed Mohammad Seyed Hosseini, Mohsen Shahrousvand, Mohsen Hajikhani, Mohammad Shahrousvand
A-10-370-5	Preparation and Characterization of Laser Jet Printer Toner particles by Emulsion Polymerization Method	Bahareh Babaei, Mohsen Najafi, Ataee Fard Maryam
A-10-1231-3	Synthesis of Waterborne Polyurethanes based on Acrylate Monomers	Hengameh Honarkar
A-10-1792-2	In-situ Synthesis and CO <sub>2</sub> separation properties of polyvinyl acetate/HNT nanocomposite membrane	nima pakzad, dr. mohammad ali semsarzadeh, dr. mahdi abdollahi
A-10-1055-2	Determination of the curing degree of thermoset polyimide at different temperatures by FT-IR spectroscopy	hassan fattahi, masood mohammadi nik, mehrzad mortazaiee
A-10-1699-1	Fabrication of Conducting Nanocomposites via Electropolymerization for Neural Prostheses	Majid Nasrollahi

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A-10-1641-2	The Controlling Role of Tempering Time During the Synthesis Procedure of Mg(OEt) <sub>2</sub> -Based Ziegler-Natta Catalyst	Mohammad Hossein Jandaghian, Abdol Hannan Sepahi, Reza Rashedi, Kamal Afzali, Ehsan Nikzinat, Maryam Masouri, Raziieh Davand
A-10-1801-1	Effect of deep eutectic solvent (DES) hydrogen bond acceptor (HBA) on the cluster size and ionic conductivity of Nafion membrane	Mohammad Bagher Karimi, Fereidoon Mohammadi
A-10-1701-1	How Vinyl Monomers Interact with Point Defects of Graphene: A Systematic DFT Study	P. Alamdari, F. Sharif, S. Mazinani, G. Sastre, H. Garcia
A-10-1723-1	Surface Zwitterionization of Polyethersulfone Membrane via Corona Air Plasma for Separation of Oil-in-Water emulsion	Parisa Salimi, Abdolreza Aroujalian, Davood Iranshahi,

## Seminar Participants

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