



# اعضای هیئت علمی

دانشکده مهندسی پلیمر

دانشگاه صنعتی سهند



### **Dr. Farhang Abbasi**

Position: Professor

Years of Academic

Experience: 12

Room: 301

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Current Number of MSc.

Students: 5

Current Number of Ph.D.

Students: 5

### **Courses Teach:**

- Principles of Polymerization Engineering
- Kinetics and Polymerization Reactors Design
- Kinetics and Reactors of Polymerization
- Physical and Mechanical Properties of Plastics
- Biomaterials

### **Research Fields:**

- Polymer solar cells
- Surface and bulk modification of polymers
- Polymer brushes
- Skin regeneration and skin substitutes
- Polymer single crystals

## Representative past thesis (Master Degree):

- طراحی و ساخت آرایه ی میکروالکترودی بر پایه ی پلی (دی متیل سیلوکسان)، پایان نامه کارشناسی ارشد، دانشگاه صنعتی سهند، دی ۱۳۹۳.
- ساخت داربست‌های پلیمری زیست تخریب پذیر برای مهندسی بافت پوست با استفاده از پایان نامه کارشناسی ارشد، دانشگاه صنعتی سهند، دی ۱۳۹۳.
- پیش‌بینی ریزساختار داربست‌های پلیمری تهیه شده به‌وسیله روش خشک‌سازی انجمادی، پایان نامه کارشناسی ارشد، دانشگاه صنعتی سهند، مرداد ۱۳۹۳.
- تهیه و بررسی خواص برس‌های پلیمری نانوساختار مقید روی تک بلورهای رشد یافته از مذاب، پایان نامه کارشناسی ارشد، دانشگاه صنعتی سهند، مرداد ۱۳۹۳.

## Topics of some affordable thesis (Master Degree):

- ساخت پلی دی متیل سیلوکسان متخلخل برای استفاده در جایگزین‌های قلبی-عروقی
- ساخت پایه نانو ساختار PVDF و بهبود آبدوستی آن از طریق سنتز برس پلیمری روی آن برای کاربرد غشا
- سنتز کوپلیمر قطعه‌ای پلی‌آمید-پلی‌اتیلن گلیکول یا ریزساختار معین و بررسی رفتار تشکیل فیلم
- رشد تک‌بلور از کوپلیمرهای دو قطعه‌ای پلی‌اتیلن گلیکول-پلی‌آنیلین و بررسی خواص رسانایی آن
- سنتز کمپلکس PEDOT:PSS و بررسی اثر فضاویژگی پلی استایرن بر خواص الکتریکی فیلم‌های نازک

### Representative past thesis (Ph.D. Level):

- تهیه سیستم‌های پلیمری پایه تیوفنی و کنترل مورفولوژی برای کاربرد در سلول‌های خورشیدی و افزایش کارایی آن، رساله دکتری، دانشگاه صنعتی سهند، بهمن ۱۳۹۳.
- اصلاح سطوح پلیمری با استفاده از پلیمریزاسیون پیوندی و مطالعه کنفورماسیون زنجیرهای مقید، رساله دکتری، دانشگاه صنعتی سهند، ۱۳۹۲.

### Topics of some affordable thesis (Ph.D. Level):

- سنتز برسه‌های پلیمری نانوساختار روی پایه ی متخلخل و ارزیابی خواص غشایی آنها در جداسازی گاز
- تولید ذرات پلیمری قابل انبساط به منظور ساخت میکروبالنه‌های با خواص پوسته بهبود یافته
- ایجاد یک پلت‌فرم مناسب و مستعد برای رشد سلول‌های اندوتلیال بر پایه ی پلی‌دی‌متیل سیلوکسان برای کاربردهای قلبی-عروقی
- کنترل مورفولوژی نانو مقیاس لایه ی فعال با استفاده از کوپلیمرهای قطعه ای میله ای-کویلی و بررسی تأثیر آن بر افزایش بازه تبدیل توان در سلول‌های خورشیدی پلیمری پایه تیوفنی



### **Dr. Mostafa Rezaei**

Position: PhD., Associate Prof.

Years of Academic

Experience: 11 years

Room:

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Current Number of MSc.

Students: 5

Current Number of Ph.D.

Students: 5

### **Courses Teach:**

- Engineering Properties of Polymers (Ph.D. and MSc.)
- Thermodynamics of Polymer Solutions and Blends (Ph.D.)
- Advanced Thermodynamics(MSc.)
- Plant Design and Economics for Chemical Engineers (BSc)

### **Research Fields:**

- Engineering Properties of Polymers
- Polymeric Biomaterials
- Tribological Properties of Polymers and Composites
- Sintering of Polymers
- Polymeric Foams
- Coating

### **Representative past thesis (Master Degree):**

- PVC Rigid Foams
- PCL /Nano hydroxyapatite Scaffold
- Self Healing Microcapsules
- Porous Shape Memory PU
- Biodegradable Polymers

### **Topics of some affordable thesis (Master Degree):**

- PVC Foam Preparation from IPN Method
- Preparation of Biodegradable Composite for Packaging
- Visual Foaming Dynamics Studies
- Carbon Aerogels (Preparation and Characterization)

### **Representative past thesis (Ph.D. Level):**

- Batch Foaming Dynamics of St-MMA Copolymer
- Rigid Crosslinked PVC/Organoclay Nanocomposite Foams
- Bubble Growth Dynamics of Foaming System
- Carbon Aerogels
- Shape Memory Polyurethane

### **Topics of some affordable thesis (Ph.D. Level):**

- Shape Memory Polymers (Synthesis and Characterization)
- Foaming Dynamics ( Experimental and Numerical Simulation)



## **Dr. Mir Karim Razavi Aghjeh**

Position: Associate Professor

Years of Academic Experience: 10 years

Room: 232

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Current Number of MSc. Students: 7

Current Number of Ph.D. Students: 5

## **Courses Teach:**

- Heat Transfer
- Rheology of Polymers
- Polymer Processing
- Polymer Blends
- Chemical Reaction Engineering

## **Research Fields:**

- Rheology and Morphology of Multiphase Polymeric Systems
- Reactive Modification of Polymers and Polymer Blends
- Fracture in Polymeric Multicomponent Systems
- Polymeric Nanocomposites
- Polyolefin Foam Processing



### **Representative past thesis (Master Degree):**

- Microstructure and fracture behavior of PP/PA/EPDM ternary blends
- Rheology and morphology of PP/PA/EPDM ternary blends
- Evolution of nano-clay migration in PE/PA/Clay blend nanocomposites
- Rheology, morphology and relaxation behavior of PP/PMMA/PS ternary blends
- Synthesis and characterization of graphene and functionalized graphene to be used in PVDF/PE/Graphene blend nanocomposites
- Study on fracture behavior of PP/EPDM/Silica blend nanocomposites
- Study on thermal cracking of PE

### **Topics of some affordable thesis (Master Degree):**

- Evaluation of deformation micro-mechanisms in PP/EPDM/Silica blend nanocomposites
- Rheology and morphology of PVDF/PE/Graphene nanocomposites
- Study on thermal cracking of PE and PP
- Study on filler migration phenomena in PS/PMMA/Silica blend nanocomposites
- Nonlinear viscoelastic properties of polymer blend nanocomposites

### **Representative past thesis (Ph.D. Level):**

- ❑ Fracture behavior and deformation micro-mechanisms in PP/EPDM/CNT blend nanocomposites
- ❑ Microstructure and fracture micro-mechanisms in PP/PA/EPDM ternary blends
- ❑ Rheology, morphology and conductivity of PVDF/PE/Graphene blends nanocomposites
- ❑ Study on parameters affecting the migration of nano-silica in PS/PMMA/Silica blend nanocomposites

### **Topics of some affordable thesis (Ph.D. Level):**

- ❑ Study on microstructure, fracture behavior and deformation micro-mechanisms in PP/EPDM/Silica blend nanocomposites
- ❑ Synthesis and characterization of graphene and functionalized graphene to be used as interfacial agent of polymer blends



### **Dr. Mahdi Salami Hosseini**

Position: Assistant Professor

Years of Academic Experience: 6

Room: C206

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Current Number of MSc.

Students:5

Current Number of Ph.D.

Students: 5

### **Courses Teach:**

- Advanced fluid mechanics (MSc)
- Advanced engineering mathematics (MSc)
- Continuum Mechanics (PhD)
- Finite element method (PhD)
- Transport phenomena in polymeric systems (PhD)
- Macromolecular Hydrodynamics

### **Research Fields:**

- Computational Rheology
- Process modeling and Simulation
- Microfluidic
- Crystallization of polymers (simulation)
- Viscoelastic and complex fluid mechanics



**Dr. Mehdi Salami-Kalajahi**

Position: Assistant Professor

Years of Academic

Experience: 4 years

Room:

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Current Number of MSc.

Students: 6

Current Number of Ph.D.

Students: 5

**Courses Teach:**

- ..Reactor Engineering
- ...Polymerization Engineering
- ..Engineering Resins
- ...Synthesis and Kinetics of Polymerization
- ..
- ..

**Research Fields:**

- ..Stimuli-responsive Polymers in Drug Delivery Systems
- ...Surface Chemistry of Nanoparticles
- ..“Living”/Radical Polymerization Systems
- ...Polysulfide Polymers and Nanocomposites
- ..Corrosion of Aluminium
- ..



### **Dr. Kiyumars Jalili**

Position: Assistant Professor

Years of Academic

Experience: 2 years

Room:

Tel: +98-41-33459087

Email Add:

Current Number of MSc.

Students: 6

Current Number of Ph.D.

Students: 1

### **Courses Teach:**

- Advanced Mathematics
- Advanced Process Control and Engineering
- Chemical Reaction Engineering
- Surface Phenomena
- Numerical Calculations
- Applied Mathematics
- Programming with MATLAB and C++
- Technical Writing

### **Research Fields:**

- Responsive Polymer Brushes
- Block Copolymer Self Assembly
- Tissue Engineering
- Monte Carlo and Molecular Dynamic Simulation of Polymeric Systems
- Multiscale Modeling of Polymerization Reactions
- Surface Modification

### **Representative past thesis (Master Degree):**

- Synthesis and Characterization of Core-Shell Nanoparticles Based on Poly(dimethylsiloxane)**
- Synthesis and Morphological Investigation of Amphiphilic Block Copolymers Based on Poly(ethylene glycole)**
- ..
- ..

### **Topics of some affordable thesis (Master Degree):**

- Thin Film Phase Behavior of PDMS-b-dPEG/(linear)PDMS blends using SIMS Depth Profiling**
- Synthesis and Microfluidic-Assisted Self-Assembly of PDMS-based Bottle Brush Block Copolymers**
- Thermal-Degradation of of PDMS-based Bottle Brush Block Copolymers under Shear Flow**
- ..

### **Topics of some affordable thesis (Ph.D. Level):**

- Development of a suitable platform capable for the growth of endothelial cells on a PDMS-based substrate for cardiovascular applications**
- 3-Dimensional Soft Self-Stacking of Graphene in Reversible Hybrid Hydrogels: A New Framework for Flexible Supercapacitors, Energy Harvesting Fuel Cells, and Soft Robotics**
- Biomimicry Neuronal Signaling through Axon using Multistimuli-Gated Phospholipid Membrane with Mechano- and pH-Responsive Polymeric Hydrogels and Solid Supported on pH-responsive Polymer Brush Cushions Grafting from Mesoporous Microtubule Poly(dimethyl siloxane) (PDMS) Elastomer: A Step toward Synthetic Neural Implants**
- ..



## Dr. Ghasemi

Position: Assistant Professor of  
Polymer Engineering and Science

Years of Academic Experience: 1

Room:

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Email Add: [Ghasemi@sut.ac.ir](mailto:Ghasemi@sut.ac.ir)

Current Number of MSc.

Students:

Current Number of Ph.D.

Students:

## Courses Teach:

- ❑ Characterization and Identification of Polymers
- ❑ Advanced Physical Chemistry Of Polymers
- ❑ Thermodynamics of Polymer Solutions and Blends

## Research Fields:

- ❑ Thermodynamics of Polymer Solutions and Blends
- ❑ Polymeric Membrane and Fiber
- ❑ Polymer Nanocomposites
- ❑ Modeling and Simulation
- ❑ Polymer Synthesis and Characterization





### **Dr. Morteza Nasiri**

Position: Assistant Prof.

Years of Academic

Experience: 14

Room:

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Current Number of MSc.

Students: 0

Current Number of Ph.D.

Students: 0

### **Courses Teach:**

- Advanced Spectroscopy
- Computer Application in Polymerization Engineering
- General Chemistry
- Organic Chemistry laboratory

### **Research Fields:**

- Polymer solar cells
- Conducting polymers
- Synthesis of polymers
- Suspension polymerization
- Kinetic study in polymerization systems
- Polymeric Foams

## Representative past thesis (Master Degree):

- ❑ Kinetics Study and Reactor Design of Suspension Copolymerization of styrene - Methyl Methacrylate for Preparation of Expandable Copolymer
- ❑ Investigation on the Effective Parameters Determining the Microstructure of SAN Copolymer in Suspension Polymerization System and the Effect of Nanoclay Addition, *By: Somayeh Jabbari*
- ❑ Studying the synthesis of PEDOT:PSS complex and effect of its formulation on the electrical properties, *By: Masoume Khaleghi Moghaddam*



### **Dr. Behzad Pourabbas**

Position: Professor

Years of Academic

Experience: 20Y

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Tel: 9083

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Current Number of MSc.

Students: 7

Current Number of Ph.D.

Students: 4

### **Courses Teach:**

- Polymer Physics (PhD.)
- Chemical Polymer Physics (PhD., MSc.)
- Polymer Surface Treatments (PhD.)
- Modern characterization Methods (PhD., MSc.)
- Microlithography (PhD.)

### **Research Fields:**

- Nanostructured Polymeric Materials
- Nano and Microfabrication
- Electrically Conductive Polymers
- Surface Modification
- ..
- ..

### **Representative past thesis (Master Degree):**

- Clay/Polymer Nanocomposites
- Graphene/Epoxy and Polyester Nanocomposites
- Surface modification of PMMA and PC
- Smart Polymer/Silica nanoparticle synthesis and characterization
- ..

### **Topics of some affordable thesis (Master Degree):**

- Thin Films of Graphene dispersions, conductive adhesive layers.
- Surface modification of the polymer thin films to support Inkjet printing.
- Graphene liquid dispersions for layered deposition over polymeric plates.
- Multilayer supercapacitors based on conductive Graphene
- Polymeric batteries based on graphene compounds.
- Simulation of graphene oxide reduction to reduced graphene.

### **Representative past thesis (Ph.D. Level):**

- Micro and Nano patterning with conductive polymers on surface and characterization
- Multiscale simulation of graphene/epoxy nanocomposites
- Photoresist/graphene in-situ synthesis and patterning ability

### **Topics of some affordable thesis (Ph.D. Level):**

- Electrical conduction theory and simulation in conductive polymers.
- Synthesis and simulation of Graphene/conductive polymer electronic interactions.
- Novel lithographic methods using conductive polymers for all-polymer batteries.
- OLED devices based on flexible technology, using graphene/conductive polymer nanocomposites.

سخن آخر



**امید به استعانت ذات باریتعالی و  
با آرزوی برگزاری مراسم فارغ التحصیلی**

**بزودی و در بهترین شرایط**