

Saleheh Abbaspoor

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Education:

- B.Sc in Chemical Engineering-Refining Industries
Arak University, Faculty of Engineering
- M.Sc in Chemical Engineering-Polymer
Sahand University of Technology, Polymer Engineering Department
- Ph.D in Chemical Engineering-Polymer
Sahand University of Technology, Polymer Engineering Department

Scientific Activities:

Polymeric Materials, Polymerization and Synthesis, Polymer Chemistry, Material Characterization, Chemical Engineering, Single Crystal, Crystallization, Polymer Physic, Polymer Brushes, Polymer Solar Cells, Surface Patterning, Crystallography, X-ray Diffraction, Thin Films and Nanotechnology, Atom Transfer Radical Polymerization, Small-Angle X-Ray Scattering, Nanomaterials, Dielectric and Conductive Polymers, Biocompatible and Biodegradable Polymers, Polyaniline, Poly(3-hexylthiophene), Photovoltaic Devices, ...

Journal Publications

1) **Saleheh Abbaspoor**, Farhang Abbasi, Samira Agbolaghi: A Novel Approach to Prepare Polymer Mixed-Brushes via Single Crystal Surface Patterning. **RSC Advances (IF: 3.119) 2014**, 4(33): 17071–17082.

DOI: 10.1039/c4ra00086b.

2) Samira Agbolaghi, Farhang Abbasi, **Saleheh Abbaspoor**: Epitaxial Single Crystal Surface Patterning and Study of Physical and Chemical Environmental Effects on Crystal Growth. **Colloid and Polymer Science (IF: 1.536) 2014**, 292(6): 1375–1383.

DOI: 10.1007/s00396-014-3197-9.

3) **Saleheh Abbaspoor**, Farhang Abbasi, Samira Agbolaghi: Effects of Various Polymer Brushes on the Crystallization of Poly(ethylene glycol) in Poly(ethylene glycol)-*b*-Polystyrene and Poly(ethylene glycol)-*b*-Poly(methyl methacrylate) Single Crystals. **Journal of Polymer Research (IF: 2.426) 2014**, 21(493): 1–8.

DOI: 10.1007/s10965-014-0493-5.

4) Samira Agbolaghi, Farhang Abbasi, **Saleheh Abbaspoor**: Preparation of Polymer Brushes via Growth of Single Crystals of Poly(ethylene glycol)-*block*-Polystyrene Diblock Copolymers Synthesized by ATRP and Studying the Crystal Lateral Size and Brush Tethering Density. **Polymer Bulletin (IF: 2.014) 2014**, 71(12): 3177–3196.

DOI: 10.1007/s00289-014-1244-9.

5) Samira Agbolaghi, Mona Alizadeh-Osgouei, **Saleheh Abbaspoor**, Farhang Abbasi: Self-Assembling Nano Mixed-Brushes Having Co-Continuous Surface Morphology by Melt Growing Single Crystals and Comparison with Solution Patterned Leopard-Skin Surface Morphology. **RSC Advances (IF: 3.119) 2015**, 5(2): 1538–1548.

DOI: 10.1039/c4ra09311a.

6) Samira Agbolaghi, Farhang Abbasi, **Saleheh Abbaspoor**, Mona Alizadeh-Osgouei: Self Designed Surfaces via Single-co-Crystallization of Homopolymer and Diblock Copolymers in Various Growth Conditions. **European Polymer Journal (IF: 3.862) 2015**, 66: 108–118.

DOI: 10.1016/j.eurpolymj.2015.02.003.

7) Maryam Nazari, Samira Agbolaghi, **Saleheh Abbaspoor**, Homa Gheybi, Farhang Abbasi:

Arrangement of Conductive Rod Nano brushes via Conductive–Dielectric–Conductive Sandwiched Single Crystals of Poly(ethylene glycol) and Polyaniline Block Copolymers. **Macromolecules (IF: 5.918) 2015**, 48(24): 8947–8957.

DOI: 10.1021/acs.macromol.5b02179.

8) Samira Agbolaghi, **Saleheh Abbaspoor**, Farhang Abbasi: Synthesis of Polymer Nanobrushes by Self-Seeding Method and Study of Various Morphologies by AFM. **International Nanoletters (ISC) 2015**, 6(1): 11–19.

DOI: 10.1007/s40089-015-0166-3.

9) Mona Alizadeh-Osgouei, Samira Agbolaghi, **Saleheh Abbaspoor**, Farhang Abbasi: A Subtle Insight into Nano-Convergence of Substrate Thickness in Melt-Grown Single-Cocrystals. **Colloid and Polymer Science (IF: 1.536) 2016**, 294(5): 869-878.

DOI: 10.1007/s00396-016-3842-6.

10) Samira Agbolaghi, Maryam Nazari, **Saleheh Abbaspoor**, Homa Gheybi, Farhang Abbasi: Micro/Nano Conductive-Dielectric Channels Designed by Poly(ethylene glycol) Single Crystals Covered by Polyaniline Nanofibers. **Polymer (IF: 4.231) 2016**, 92: 264–272.

DOI: 10.1016/j.polymer.2016.04.006.

11) Samira Agbolaghi, Maryam Nazari, **Saleheh Abbaspoor**, Homa Gheybi, Farhang Abbasi: Characterization of Novel Extremely Extended Regime in Conductive Rod-Like Polyaniline Nanobrush-Covered Poly(ethylene glycol) Single Crystals. **European Polymer Journal (IF: 3.862) 2016**, 82: 196–207.

DOI: 10.1016/j.eurpolymj.2016.07.023.

12) Samira Agbolaghi, **Saleheh Abbaspoor**, Farhang Abbasi: Detection of Polymer Brushes developed via Single Crystal Growth. **International Journal of Nanoscience and Nanotechnology (ISC) 2016**, 12:79–90.

13) Samira Agbolaghi, Farhang Abbasi, **Saleheh Abbaspoor**: Double/Single Phase Segregation and Vertical Stratification Induced by Crystallization in All-Crystalline Tri/Diblock Copolymers and Homopolymer Blends of Poly(3-hexylthiophene) and Poly(ethylene glycol). **Surface and Interface Analysis (IF: 1.665) 2016**, 49(7): 630–639.

DOI: 10.1002/sia.6202.

14) Samira Agbolaghi, Mona Alizadeh-Osgouei, Sahar Zenoozi, **Saleheh Abbaspoor**, Farhang Abbasi: Fine Fibrillar and Rectangular/Hexagonal Ordered Grains of Poly(3-hexyl thiophene) and Poly(ethylene glycol) Developed by Seeding Technique. **Nanostructures in Chemistry (IF: 4.077) 2017**, 7(1): 15–27.

DOI: 10.1007/s40097-016-0210-5.

15) **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Development of Nano-Channel Single Crystals and Verification of their Structures by Small Angle X-ray Scattering. **Polymer Bulletin (IF: 2.014) 2017**, 74(4): 1103–1119.

DOI: 10.1007/s00289-016-1766-4.

16) Maryam Nazari, Samira Agbolaghi, Homa Gheybi, **Saleheh Abbaspoor**, Farhang Abbasi: A Focus on the Features of Polyaniline Nanofibers Prepared *via* Developing the Single Crystals of their Block Copolymers with Poly(ethylene glycol). **Bulletin of Materials Science (IF: 1.392) 2018**, 41(29): 1–11.

DOI: 10.1007/s12034-017-1520-z.

17) Samira Agbolaghi, **Saleheh Abbaspoor**, Farhang Abbasi: A Comprehensive Review on Polymer Single Crystals (from Fundamental Concepts to the Applications). **Progress in Polymer Science (IF: 22.62) 2018** , 81: 22–79.

DOI: 10.1016/j.progpolymsci.2017.11.006.

18) **Saleheh Abbaspoor**, Samira Agbolaghi, Maryam Nazari, Farhang Abbasi: Conventional and Rare-Patched Rod/Coil Matrix-Dispersed Patterings on Single Crystals Affected by Rigidity, Amorphism and Crystallinity of Brushes. **European Polymer Journal (IF: 3.862) 2017**, 94: 446–459.

DOI: 10.1016/j.eurpolymj.2017.07.038.

19) **Saleheh Abbaspoor**, Samira Agbolaghi, Maryam Nazari, Farhang Abbasi: Disperse within Disperse Morphology of Polyaniline, Polystyrene and Poly(methyl methacrylate) in Triple Mixed Brushes and Coily matrix-rod Disperse in Double Mixed Brushes via Single Crystal Growth. **Journal of Polymer Research (IF: 2.426) 2017**, 24(160):1–11.

DOI: 10.1007/s10965-017-1322-4.

20) Yalda Jahanbani, Behnaz Memarmaher, Hakimeh Ghaleh, Samira Agbolaghi, Kiyumars Jalili, **Saleheh Abbaspoor**, Farhang Abbasi: Three Dimensional Macro/Mesoporosity Developments in Polydimethylsiloxane. **International Journal of Polymeric Materials and Polymeric Biomaterials (IF: 1.982) 2018**, 1–8.

DOI: 10.1080/00914037.2017.1383252.

21) Samira Agbolaghi, Sara Ebrahimi, Bakhshali Massoumi, **Saleheh Abbaspoor**, Raana Sarvari, Farhang Abbasi: Enhanced Properties of Photovoltaic Devices Tailored with Novel Supramolecular Structures Based on Reduced Graphene Oxide Nano sheets Grafted/Functionalized with Thiophenic Materials. **Journal of Polymer Science, Part B: Polymer Physics (IF: 2.499) 2017**, 55(24):1877-1889.

DOI:10.1002/polb.24518.

22) **Saleheh Abbaspoor**, Samira Agbolaghi, Mojgan Mahmoudi, Yalda Jahanbani, Farhang Abbasi, Raana Sarvari: Effect of Miscibility on Migration of Third Component in Ternary Mixed-Brushes Subsuming Star-Like Co-Continuous and Disperse-Within-Disperse Morphologies Patterned by Colloidal Single Crystals. **Polymer International (IF: 2.574) 2018**, 67(1): 141–150.

DOI: 10.1002/pi.5495.

23) **Saleheh Abbaspoor**, Samira Agbolaghi, Mojgan Mahmoudi, Bakhshali Massoumi, Raana Sarvari, Younes Beygi-Khosrowshahi, Somaye Sattari: Supramolecular Donor-Acceptor Structures via Orienting Predeveloped Fibrillar Poly(3-hexylthiophene) Crystals on

Bared/Functionalized/Grafted Reduced Graphene Oxide with Novel Thiophenic Constituents. **Organic Electronics (IF: 3.31) 2018**, 52: 243–56.

DOI: 10.1016/j.orgel.2017.10.035.

24) Samira Agbolaghi, **Saleheh Abbaspoor**, Bakhshali Massoumi, , Raana Sarvari, Somaye Sattari, Sahar Aghapour, Somaiyeh Charoughchi: Conversion of Face-on Orientation to Edge-on/ Flat-on in Induced-Crystallization of Poly(3-hexylthiophene) *via* Functionalization and Grafting of Reduced Graphene Oxide with Thiophene Adducts. **Macromolecular Chemistry and Physics (IF: 2.335) 2018**, 219: 1700484.

DOI: 10.1002/macp.201700484.

25) Samira Agbolaghi, Sahar Zenoozi, **Saleheh Abbaspoor**, Maryam Nazari: Scattering Study of Conductive-Dielectric Nano/Micro-grained Single Crystals Based on Poly(ethylene glycol), Poly(3-hexyl thiophene) and Polyaniline. **Journal of Ultrafine Grained and Nanostructured Materials 2017 (ISC)**, 50(2): 137–51.

DOI: 10.22059/jufgns.2017.02.09.

26) Samira Agbolaghi, **Saleheh Abbaspoor**, Mona Alizadeh-Osgouei, Maryam Nazari, Farhang Abbasi: Nanostructured Single Crystals Sandwiched Between Ordered/Disordered Coily And Rod Brushes. **International Journal of Chemistry and Chemical Engineering (IF: 0.628) 2018**.

27) **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Chemical and Physical Effects of Processing Environment on Simultaneous Single Crystallization of Biodegradable Poly(ϵ -caprolactone) and Poly(Llactide) Brushes and Poly(ethylene glycol) Substrate. **European Polymer Journal (IF: 3.862) 2018**, 103: 293–303.

DOI: [10.1016/j.eurpolymj.2018.04.009](https://doi.org/10.1016/j.eurpolymj.2018.04.009).

28) Mojgan Mahmoudi, Samira Agbolaghi, Zahra Mozaffari, **Saleheh Abbaspoor**, Bakhshali Massoumi, Raana Sarvari, and Nasrin Hosseinzadeh: Star-like Poly(N-isopropylacrylamide) and Poly(ethylene glycol) Copolymers Self-Arranged in Newfound Single Crystals and Associated Novel Class of Polymer Brush Regimes with V-Type Tethers. **Macromolecular Chemistry and Physics (IF: 2.335) 2018**, 219(10): 1700638(1–12).

DOI: [10.1002/macp.201700638](https://doi.org/10.1002/macp.201700638).

29) Samira Agbolaghi, **Saleheh Abbaspoor**: Nano-Hybrids Based on Surface Modified Reduced Graphene Oxide Nanosheets and Carbon Nanotubes and a Regioregular Polythiophene. **Journal of Ultrafine Grained and Nanostructured Materials 2018 (ISC)**, 51(1): 60–70.

DOI: 10.22059/JUFGNSM.2018.01.08.

30) Nasrin Hosseinzadeh, Samira Agbolaghi, **Saleheh Abbaspoor**, Maryam Nazari, Mojgan Mahmoudi: A Delicate Maneuver on Conjugated Rod-Rod Structures Composed of Poly(3-hexylthiophene) and Polyaniline Subtending Patched-Fibrillar, Ringed-Fibrillar, Double-Fibrillar and Sandwiched Configurations. **Journal of Polymer Research 2018 (IF: 2.426)**, 25:189.

DOI: 10.1007/s10965-018-1574-7.

31) Samira Agbolaghi, **Saleheh Abbaspoor**; High Efficiencies in Nanoscale Poly (3-Hexylthiophene)/Fullerene Solar Cells. **International Journal of Nanoscience and Nanotechnology 2020 (ISC)**, 16(1): 1-12.

Patents

1) Development of Especial Morphologies of Polymer Mixed-Brushes. **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Year: **2014**.

2) Fabrication of Nano-Channel Structures Comprising Homo and Mixed Brush Layers. **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Year: **2014**.

3) Fabrication of Polymer Mixed-brushes via Self-seeding Approach and Study of Related Morphologies. **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Year: **2014**.

4) Construction of Polymeric Epitaxial Single Crystals. **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Year: **2014**.

5) Fabrication of Single-co-Crystals Comprising the Homo and Copolymers with the Same Crystalline Substrate. **Saleheh Abbaspoor**, Samira Agbolaghi, Farhang Abbasi: Year: **2014**.

6) Conductivity Induction into Patterned Nano-Structures using Conjugated Nanofibers. **Saleheh Abbaspoor**, Samira Agbolaghi, Mojgan Mahmoudi: Year: **2018**.

7) Donor-Acceptor Supramolecules Fabrication via Hybridation of Poly(3-hexyl thiophene) onto Surface Grafted Graphene. **Saleheh Abbaspoor**, Samira Agbolaghi, Raana Sarvari. Year: **2018**.

Conference Proceedings

1) Samira Agbolaghi, Sahar Zenoozi, Maryam Nazari, **Saleheh Abbaspoor**, Farhang Abbasi: Poly(3-hexylthiophene):Fullerene Photovoltaic Cells Compatibilized by Rod-Coil Block Copolymers Under Different Annealing Conditions. **12th International Seminar on Polymer Science & Technology; 2016**.

- 2) Sahar Zenoozi, Samira Agbolaghi, **Saleheh Abbaspoor**, Maryam Nazari, Farhang Abbasi: Poly(3-hexylthiophene) Nanofibers and Single Crystals Covered by Coily Dielectric Oligomers. **12th International Seminar on Polymer Science & Technology; 2016.**
- 3) Samira Agbolaghi, Maryam Nazari, Sahar Zenoozi, **Saleheh Abbaspoor**, Farhang Abbasi: High Efficient P3HT:PCBM Solar Cells via Morphology Manipulating in Active Layer by Rod-Coil Block Copolymer Compatibilizers. **2nd International Conference on New Research Achievements in Chemistry & Chemical; 2016.**
- 4) Samira Agbolaghi, Maryam Nazari, **Saleheh Abbaspoor**, Mona Alizadeh, Farhang Abbasi: Crystalline Ordered Nano-structures Sandwiched by Conductive Hairy PANI Brushes. **5th International Biennial Conference on Ultrafine Grained and Nanostructured Materials, UFGNSM15, Tehran, Iran; 2015.**
- 5) Samira Agbolaghi, **Saleheh Abbaspoor**, Mona Alizadeh-Osgouei, Farhang Abbasi: Detection of Polymer Brushes Developed via Single Crystal Growth. **2nd chemistry and biology science; 2015.**
- 6) Samira Agbolaghi, Farhang Abbasi, Mona Alizadeh-Osgouei, **Saleheh Abbaspoor**: Distinction between Features of Mixed-Brushes raised from Solution-Grown and Melt- Grown Single Crystals. **11th International Seminar on Polymer Science and Technology; 08/2014.**
- 7) Samira Agbolaghi, Farhang Abbasi, **Saleheh Abbaspoor**, Mona Alizadeh-Osgouei: Construction of Hydrophilic-Hydrophobic Nano-Structures via Cocrystallization of Polymer Chains. **Nanosymposium 93; 2014.**
- 8) **S Abbaspoor**, S Agbolaghi, F Abbasi, M Alizadeh-Osgouei: Solution Crystallization Block Copolymers and Investigation of Effective Parameters on Nano Single Crystal Lateral Habit. **The 5th International Conference on Nanostructures (ICNS5); 2014.**
- 9) S Agbolaghi, **S Abbaspoor**, F Abbasi: Single-co-Crystallization and Study of Respective Developed Morphologies. **The 5th International Conference on Nanostructures (ICNS5); 03/2014.**
- 10) S Agbolaghi, **S Abbaspoor**, F Abbasi: Polymer nano-channels comprising homo and mixed brush single crystals (Synthesis and study of environmental effects). **The 5th International Conference on Nanostructures (ICNS5); 2014.**
- 11) **S Abbaspoor**, S Agbolaghi, F Abbasi: Development of Novel Morphologies in Mixed-Brush Polymers via Single Crystal Patterning. **The 5th International Conference on Nanostructures (ICNS5); 2014.**

12) S Agbolaghi, **S Abbaspoor**, F Abbasi, M Alizadeh-Osgouei: Synthesis of Polymer Brushes of Matrix (PS)-Dispersed (PMMA) Morphologies via Single Crystal Patterning. **The 8th International Chemical Engineering Congress & Exhibition (ICHEC 2014); 2014.**

13) **S Abbaspoor**, S Agbolaghi, F Abbasi: Polymer Epitaxial Structures Including Various Mixed-Brush Single Crystals and Study of Various Responses. **The 8th International Chemical Engineering Congress & Exhibition (ICHEC 2014); 2014.**

14) **S Abbaspoor**, S Agbolaghi, F Abbasi: Patterning of PEG-b-PS/PEG and PEG-b-PMMA/PEG Single-Co-Crystals and Study of Effective Parameters on Associated Morphologies. **The 8th International Chemical Engineering Congress & Exhibition (ICHEC 2014); 2014.**

15) S Agbolaghi, **S Abbaspoor**, F Abbasi: Fabrication of Polymer Brushes from Diblock Copolymers via Self-Seeding Technique and Study of Effect of Various Polymer Brushes on Crystallization. **The 8th International Chemical Engineering Congress & Exhibition (ICHEC 2014); 2014.**

16) Samira Agbolaghi, **Saleheh Abbaspoor**, Javad Najjari, Mojgan Mahmoudi, Zahra Hosseini, Somaye Charougchi, Sahar Aghapour, Raana Sarvari. High Power Conversion Efficiencies in Nanoscale Poly(3-hexylthiophene)/Fullerene Solar Cells Modified by Rod-Coil Copolymers. **1st National Congress on Industrial Applications of Advance Materials and Manufacturing; 2017.**

17) **Saleheh Abbaspoor**, Raana Sarvari, Samira Agbolaghi, Sahar Aghapour, Somaye Charougchi, Mojgan Mahmoudi, Javad Najjari, Zahra Hosseini. Donor-Acceptor Supramolecules Based on Poly(3-hexylthiophene) and Functionalized/Grafted Reduced Graphene Oxide with Thiophene Adducts. **1st National Congress on Industrial Applications of Advance Materials and Manufacturing; 2017.**