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Publications

Journals

- Emamyari, Soheila and Mirzaei, Masoud and Mohammadinejad, Sarah and Fazli, Davood and Fazli, Hossein, "Impact of flexibility on the aggregation of polymeric macromolecules", The European Physical Journal E, Vol. 46, NO. 3, 2023
- Saadati, Maryam and Akhavan, Omid and Fazli, Hossein and Nemati, Shiva and Baharvand, Hossein, "Controlled differentiation of human neural progenitor cells on molybdenum disulfide/graphene oxide heterojunction scaffolds by photostimulation", ACS Applied Materials & Interfaces, Vol. 15, NO. 3, 2023
- Saadati, Maryam and Akhavan, Omid and Fazli, Hossein, "Single-Layer MoS₂-MoO_{3-x} Heterojunction Nanosheets with Simultaneous Photoluminescence and Co-Photocatalytic Features", catalysis, Vol. 11, NO. 11, 2021
- Taherkhani, Ali and Fazli, Hossein and Taherkhani, Farid, "Application of janus magnetic nanoparticle Fe₃O₄@ SiN functionalized with beta-cyclodextrin in thymol drug delivery procedure: an in vitro study", Applied Organometallic Chemistry, Vol. 35, NO. 11, 2021
- Kargar, Faezeh and Emadi, Saeed and Fazli, Hossein, "Dimerization of A β 40 inside dipalmitoylphosphatidylcholine bilayer and its effect on bilayer



- integrity: Atomistic simulation at three temperatures", *Proteins: Structure, Function, and Bioinformatics*, Vol. 88, NO. 11, 2020
- Emamyari, Soheila and Fazli, Hossein, "Single-chain conformational characteristics of comb-like polyelectrolytes: molecular dynamics simulation study", *Macromolecular Research*, Vol. 27, NO. 26, 2019
 - Taheri, Fereshteh Samadi and Fazli, Hossein and Doi, Masao and Habibi, Mehdi, "Granular chain escape from a pore in a wall in the presence of particles on one side: a comparison to polymer translocation", *Soft Matter*, Vol. 14, NO. 26, 2018
 - Emamyari, Soheila and Fazli, Hossein, "Polymer translocation through a nanopore in the presence of chaperones: A three dimensional MD simulation study", *Computational Condensed Matter*, Vol. 13, NO. 7, 2017
 - Mohammadi, Maryam and Fazli, Hossein and Karevan, Mehdi and Davoodi, Jamal, "The glass transition temperature of PMMA: A molecular dynamics study and comparison of various determination methods", *European Polymer Journal*, Vol. 91, NO. 7, 2017
 - Kargar, Faezeh and Emadi, Saeed and Fazli, Hossein, "The molecular behavior of a single β -amyloid inside a dipalmitoylphosphatidylcholine bilayer at three different temperatures: An atomistic simulation study: A β interaction with DPPC: Atomistic simulation", *Proteins: Structure, Function, and Bioinformatics*, Vol. 85, NO. 7, 2017
 - Khalilian, Hamidreza and Fazli, Hossein, "Obstruction enhances the diffusivity of self-propelled rod-like particles", *The Journal of Chemical Physics*, Vol. 145, NO. 16, 2016
 - Nikoofard, Narges and Fazli, Hossein, "A flexible polymer confined inside a cone-shaped nano-channel", *Soft Matter*, Vol. 11, NO. 24, 2015



- Emamyari, Soheila and Kargar, Faezeh and Sheikh-Hasani, Vahid and Emadi, Saeed and Fazli, Hossein, "Mechanisms of the self-assembly of EAK16-family peptides into fibrillar and globular structures: molecular dynamics simulations from nano- to micro-seconds", *European Biophysics Journal*, Vol. 44, NO. 24, 2015
- Emamyari, Soheila and Fazli, Hossein, "pH-dependent self-assembly of EAK16 peptides in the presence of a hydrophobic surface: Coarse-grained molecular dynamics simulation", *Soft matter*, Vol. 10, NO. 24, 2014
- Emamyari, Soheila and Fazli, Hossein, "All-atom molecular dynamics study of EAK16 peptide: the effect of pH on single-chain conformation, dimerization and self-assembly behavior", *European Biophysics Journal*, Vol. 43, NO. 24, 2014
- Nikoofard, Narges and Khalilian, Hamidreza and Fazli, Hossein, "Directed translocation of a flexible polymer through a cone-shaped nano-channel", *The Journal of Chemical Physics*, Vol. 139, NO. 7, 2013
- Fazli, H and Emadi, S and Emamyari, S and Sheikh-Hasani, V and Kargar, F, "Multi-scale Molecular Dynamics Simulations and Experimental Study of Peptides Self-assembly: A Way to a Better Understanding of Peptides and Proteins Self-assembly and Amyloid Formation", *Physical Review E—Statistical, Nonlinear, and Soft Matter Physics*, Vol. 85, NO. 6, 2012
- Pezeshkian, Weria and Nikoofard, Narges and Norouzi, Davood and Mohammad-Rafiee, Farshid and Fazli, Hossein, "Distribution of counterions and interaction between two similarly charged dielectric slabs: Roles of charge discreteness and dielectric inhomogeneity", *Physical Review E—Statistical, Nonlinear, and Soft Matter Physics*, Vol. 85, NO. 6, 2012
- Nikoofard, Narges and Fazli, Hossein, "Electric-field-driven polymer entry into asymmetric nanoscale channels", *Physical Review E—Statistical, Nonlinear, and Soft Matter Physics*, Vol.



85, NO. 2, 2012

- Mohammadinejad, Sarah and Golestanian, Ramin and Fazli, Hossein, "Chiral structure of F-actin bundle formed by multivalent counterions", *Soft Matter*, Vol. 8, NO. 13, 2012
- Nikoofard, Narges and Fazli, Hossein, "Free-energy barrier for electric-field-driven polymer entry into nanoscale channels", *Physical Review E—Statistical, Nonlinear, and Soft Matter Physics*, Vol. 83, NO. 5, 2011
- Sakha, Farzaneh and Fazli, Hossein, "Three-dimensional Brownian diffusion of rod-like macromolecules in the presence of randomly distributed spherical obstacles: Molecular dynamics simulation", *The Journal of chemical physics*, Vol. 133, NO. 23, 2010
- Baratlo, Majid and Fazli, Hossein, "Brushes of flexible, semiflexible, and rodlike diblock polyampholytes: molecular dynamics simulation and scaling analysis", *Physical Review E—Statistical, Nonlinear, and Soft Matter Physics*, Vol. 81, NO. 1, 2010
- Fazli, Hossein and Mohammadinejad, Sarah and Golestanian, Ramin, "Salt-induced aggregation of stiff polyelectrolytes", *Journal of Physics: Condensed Matter*, Vol. 21, NO. 42, 2009
- Mohammadinejad, Sarah and Fazli, Hossein and Golestanian, Ramin, "Orientationally ordered aggregates of stiff polyelectrolytes in the presence of multivalent salt", *Soft Matter*, Vol. 5, NO. 7, 2009
- Baratlo, Majid and Fazli, Hossein, "Molecular dynamics simulation of semiflexible polyampholyte brushes--The effect of charged monomers sequence", *The European Physical Journal E*, Vol. 29, NO. 3, 2009
- Fazli, Hossein and Golestanian, Ramin, "Aggregation kinetics of stiff polyelectrolytes in the presence of multivalent salt",



Physical Review E—Statistical, Nonlinear, and Soft Matter Physics, Vol. 76, NO. 4, 2007

- Fazli, H and Golestanian, R and Hansen, PL and Kolahchi, MR, "Rod-like polyelectrolyte brushes with mono-and multivalent counterions", *Europhysics Letters*, Vol. 73, NO. 3, 2005
- Fazli, Hossein and Golestanian, Ramin and Kolahchi, Mohammad R, "Orientational ordering and dynamics of rodlike polyelectrolytes", *Physical Review E—Statistical, Nonlinear, and Soft Matter Physics*, Vol. 72, NO. 1, 2005
- Kolahchi, Mohammad R and Fazli, Hossein, "Behavior of a Josephson-junction array with golden mean frustration", *Physical Review B*, Vol. 62, NO. 13, 2000

Conferences

- Lee, EY and Leforestier, A and Di Domizio, J and Curk, T and Abbaspour, L and Berezhnoy, N and Fazli, H and Nordenskiöld, L and Dobnikar, J and Gilliet, M and others, "NETs generate structured antimicrobial peptide-nucleosome immune complexes with inter-DNA spacings optimal for TLR9 activation", *Journal of Investigative Dermatology*, 2019