

Leili Javidpour

Education

- **PhD** in Physics from Sharif University of Technology, Tehran, Iran.
- **BSc** in Physics from Sharif University of Technology, Tehran, Iran.

Selected Professional Experience

- Visiting Scientist, Aspen Center for Physics, Aspen, USA, 14 June – 5 July 2015.
- Postdoctoral Associate, School of Physics, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran, Sept. 2011 – Mar. 2015.

Publications

- 11) Size Zheng, **Leili Javidpour**, Muhammad Sahimi, Katherine S. Shing and Aiichiro Nakano, *sDMD: An open source program for discontinuous molecular dynamics simulation of protein folding and aggregation*, Computer Physics Communications **247**, 106873 (2020).
- 10) **Leili Javidpour**, Anze Losdorfer Bozic, Rudolf Podgornik, and Ali Naji, *Role of metallic core for the stability of virus-like particles in strongly coupled electrostatics*, Scientific Reports **9**, 3884 (2019).
- 9) Congyue Wang, Nariman Piroozan, **Leili Javidpour**, and Muhammad Sahimi, *Effect of the geometry of confining media on the stability and folding rate of α -helix proteins*, J. Chem. Phys. **148**, 194305 (2018).
- 8) Size Zheng, **Leili Javidpour**, Katherine S. Shing, and Muhammad Sahimi, *Dynamics of proteins aggregation. I. Unbounded media*, J. Chem. Phys. **145**, 134306 (2016).
- 7) **Leili Javidpour**, Anze Losdorfer Bozic, Ali Naji, and Rudolf Podgornik, *Electrostatic stability and encapsidation of charged nano-droplets*, Soft Matter **9** (47), 11357 - 11366 (2013).
- 6) **Leili Javidpour**, Anze Losdorfer Bozic, Ali Naji, and Rudolf Podgornik, *Multivalent ion effects on electrostatic stability of virus-like nano-shells*, J. Chem. Phys. **139**, 154709 (2013).
- 5) **Leili Javidpour**, *Computer Simulations of Protein Folding*, Comput. Sci. Eng. **14** (2), 97-103 (2012).
 - ✓ Selected for the IEEE Life Sciences Portal (<http://lifesciences.ieee.org>).
- 4) **Leili Javidpour**, and Muhammad Sahimi, *Confinement in nanopores can destabilize α -helix folding proteins and stabilize the β structures*, J. Chem. Phys. **135**, 125101 (2011).
 - ✓ Selected for the Virtual Journal of Biological Physics Research Vol. **22** (7).
 - ✓ Also selected for the Virtual Journal of Nanoscale Science and Technology Vol. **24** (15).

- 3) Farzaneh Shayeganfar, **Leili Javidpour**, Nima Taghavinia, M. Reza Rahimi Tabar, Muhammad Sahimi, and Faezeh Bagheri-Tar, *Controlled nucleation and growth of CdS nanoparticles by turbulent dispersion*, *Phys. Rev. E* **81**, 026304 (2010).
- 2) **Leili Javidpour**, M. Reza Rahimi Tabar, and Muhammad Sahimi, *Molecular simulation of protein dynamics in nanopores. II. Diffusion*, *J. Chem. Phys.* **130**, 085105 (2009).
 - ✓ Selected for the Virtual Journal of Biological Physics Research Vol. **17** (5).
 - ✓ Also selected for the the Virtual Journal of Nanoscale Science and Technology Vol. **19** (11).
- 1) **Leili Javidpour**, M. Reza Rahimi Tabar, and Muhammad Sahimi, *Molecular simulation of protein dynamics in nanopores. I. Stability and folding*, *J. Chem. Phys.* **128**, 115105 (2008).
 - ✓ Selected for the Virtual Journal of Biological Physics Research Vol. **15** (7).

Selected Conferences/Workshops (Papers and Presentations)

- **Leili Javidpour**, Anze L. Bozic, Ali Naji, and Rudolf Podgornik, “Electrostatic stability of charged nano-droplets in the presence of multivalent ions”, 2nd IPM Conference on Soft Matter, Biological and Statistical Physics, IPM, Tehran, Iran, 25 Oct. 2013.
 - Selected as 1 of 4 prized posters of the conference (http://physics.ipm.ac.ir/conferences/statphys2_conf/posterawards.jsp)
- **Leili Javidpour**, Anze L. Bozic, Ali Naji, and Rudolf Podgornik, “Multivalent ion effects on electrostatic stability of virus-like nano-shells”, Workshop on Physical Virology, ICTP, Trieste, Italy, 24 – 28 Sep. 2012.
 - Selected as 1 of 4 prized posters for a short 10 min oral presentation at the end of the workshop (<http://indico.ictp.it/event/a11189/other-view?view=ictptimetable>).
- **Leili Javidpour**, M. Reza Rahimi Tabar, and Muhammad Sahimi, “Transport of proteins in a nanopore”, *2007 AIChE Annual Meeting*, Salt Lake City, Utah, USA, 4 – 9 Nov. 2007. (Oral presentation by Muhammad Sahimi)
- **Leili Javidpour**, M. Reza Rahimi Tabar, and Muhammad Sahimi, “Molecular Dynamics Simulation of folding and Diffusion of Proteins in Nanopores”, *Introduction to Nanofluidics*, International Center for Theoretical Physics (ICTP), Trieste, Italy, 20 – 24 Aug. 2007 (Oral presentation by Leili Javidpour: <http://indico.ictp.it/event/a06212/material/3/>).

Other Conference/Workshop attendances

- *The workshop on Numerical Modeling in Environmental Biotechnology* (by COMSOL software), Institute for Research in Fundamental Sciences (IPM), Tehran, Iran, 28 Oct. – 1 Nov. 2017.
- *9th workshop on high performance computing (HPC9)*, Institute for Research in Fundamental Sciences (IPM) & The Physics Society of Iran, Tehran, Iran, 27 – 29 Oct. 2015.

- *Physics and Mathematics of Viral Assembly*, Aspen Center for Physics, Aspen, USA, 14 Jun. – 5 Jul. 2015.
- *5th International Conference on Nanostructures (ICNS5)*, Sharif University of Technology & Institute for Nanoscience and Nanotechnology, Kish Island, Iran, 6 – 9 Mar. 2014.
- *Grid and HPC workshop IV*, Institute for Research in Fundamental Sciences (IPM) & The Physics Society of Iran, Tehran, Iran, 12 – 18 Dec. 2011.
- *First Workshop on High Performance Computing*, Institute for Research in Fundamental Sciences (IPM), Tehran, Iran, 16 – 21 Feb. 2008.

Honors and Achievements

- Membership in National Elites Foundation (of Iran), 2009 (also awarded Kazemi Ashtiani grant in summer 2012)
- Ranked 1st in nationwide entrance exam for MSc in physics of Iranian universities among 4,239 examinees, 2003.
- Admitted to the PhD program at Sharif University of Technology as an exceptional talented student, 2003, eligible to “continuous PhD program”.
- Ranked 108th in nationwide entrance exam for all Iranian universities among over 400,000 examinees, 1999.
- Silver medalist in Olympiad in Informatics among all high school students of Iran, 1998. (Students ranked 1st – 4th were given gold medals and chosen for the International Olympiad in Informatics 1999).