Curriculum Vitae: *Dmitry Bedrov*
Associate Professor, Department of Materials Science and Engineering, University of Utah, 122 S. Central Campus Drive, Rm. 304, University of Utah, Salt Lake City, UT 84112.
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Professional Preparation

Odessa State Academy of Refrigeration, Odessa, Ukraine	Thermophysics	**B.S**. *with Honors* 1995.
University of Utah, Salt Lake City, Utah	Chemical & Fuels Engineering	**Ph.D** 1999.
University of Utah, Salt Lake City, Utah	Computational Modeling of Materials	1999-2000 (post-doctoral fellow)

Appointments

University of Utah, Department of Materials Science and Engineering	Associate Professor	08/2013-present
University of Utah, Department of Materials Science and Engineering	Research Associate Professor	06/2011-08/2013
University of Utah, Department of Materials Science and Engineering	Research Assistant Professor	06/2000-06/2011
Wasatch Molecular Inc.	President	11/2011-pesent time
Wasatch Molecular Inc.	Vice President of Research	05/2006-10/2011

Awards

Alexander von Humboldt Experienced Researcher Fellowship to study " Multiscale Modeling of Non-equilibrium Block-Copolymer Morphologies for Energy Applications" (2011-2014)

***Professional Activities and Services*:**

• Assistant Program Manager, Member of the Executive Committee, and the Lead for the Area of Electrochemical Energy Devices in the ***Collaborative Research Alliance*** "Computationally Guided Design of Energy Efficient Electronic Materials" between the University of Utah and the Army Research Lab.

• Since 2012 a member of the University of Utah ***Center for High Performance Computing*** allocation committee.

• Regular reviewer for variety of premier scientific journals such as *Macromolecules, Journal of Chemical Physics, Journal of Physical Chemistry, Langmuir, Journal of American Chemical Society, Physical Review (E,B, and Letters), Polymer, Journal of Polymer Science Part B: Polymer Physics, Nanoletters, Journal of Non-crystalline Solids, and Philosophical Magazine.*

Selected publications:

Chen, D.; Porada, J.H.; Hooper, J.B.; Klittnick, A.; Shen, Y.; Korblova, E.; ***Bedrov, D.***; Walba, D.M.; Glaser, M.A; Maclennan, J.E.; Clark, N.A.; "Chiral Heliconical Ground State of Nanoscale Pitch in a Nematic Liquid Crystal of Achiral Molecular Dimers" *Proc. Nat. Acad. Sci.* **2013**, *110 , 15931-15936.*

Vatamanu, J.; Hu, Z.; ***Bedrov, D***.; Perez, C.; Gogotsi, Y.; "Increasing Energy Storage in Electrochemical Capacitors with Ionic Liquid Electrolytes and Nanostructured Carbon Electrodes" *J. Phys. Chem. Lett*. **2013**, *4*, 2829–2837.

Xing, L.; Vatamanu, J.; Borodin, O.; ***Bedrov, D.***; "On the Atomistic Nature of Capacitance Enhancement Generated by Ionic Liquid Electrolyte Confined in Subnanometer Pores" *J. Phys. Chem. Lett.* **2013**, 4,132-140.

Steinmüller, B.; Mueller, M.; Hambrecht, K.; ***Bedrov, D***.; "Random Block Copolymers: Structure, dynamics and mechanical properties in the bulk and at selective substrates" *Macromolecules* **2012**, *45*, 9841-9853.

Xing, L.; Vatamanu, J.; Borodin, O.; Smith, G.D.; ***Bedrov, D.***; "Electrode/Electrolyte Interface in Sulfolane-based Electrolytes for Li-Ion Batteries: A Molecular Dynamics Simulation Study" *J. Phys. Chem. C.* **2012** *116*, 23871-23881.

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Smith, G.D.; ***Bedrov, D***.; "Dispersing Nanoparticles in Polymer Matrix: Are Long, Dense Polymer Tethers Really Necessary?" *Langmuir* **2009**, *25*, 11239–11243.

Bedrov, D. J.B. Hooper, G.D. Smith, T.D. Sewell " Shock-induced Transformations in Crystalline RDX: A Uniaxial Constant-Stress Hugoniostat Molecular Dynamics Simulation Study" *J. Chem. Phys*. **2009**, *131*, 034712.

Liu, W.; ***Bedrov, D.***; Kumar, S.K.; Veytsman, B.; Colby, R.H. "Local Composition Distributions of Miscible Polymer Blends Probed by Molecular Dynamics Simulation" *Phys. Rev. Lett*. **2009**, *103*, 037801.

Bedrov, D.; Smith, G.D.; Davande, H.; Li, L. "Passive Transport of C_{60} Fullerenes into Lipid Membrane. A Molecular Dynamics Simulation Study" *J. Phys. Chem. B* **2008**, *112*, 2078-2084.

Bedrov, D.; Smith, G.D.; Yoon, J.; "Structure and Interactions in Micellar Solutions: Molecular Simulations of Pluronic L64 Aqueous Solutions." *Langmuir* **2007**, *23*, 12032-12041.

Bedrov, D.; Smith, G.D.; "A Molecular Dynamics Simulation Study of Segmental Relaxation Processes in Miscible Polymer Blends" *Macromolecules* **2006**, *39*, 8526-8535.

Li, L.; ***Bedrov, D***.; Smith, G.D. "Repulsive Solvent-induced Interaction between C_{60} Fullerenes in Water" *Phys. Rev. E*. **2005**, *71*, 011502 (1-4).

Bedrov, D.; Smith, G.D.; Li.L.; "A Molecular Dynamics Simulation Study of the Role of Evenly-spaced Poly(ethylene oxide) Tethers on the Aggregation of C_{60} Fullerenes in Water", *Langmuir*, **2005**, *21*, 5251-5255.

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Bedrov, D.; Smith, G.D., Smith, J.S. " Matrix-induced Nanoparticle Interactions in Polymer Melts. A Molecular Dynamics Simulation Study" *J. Chem. Phys.* **2003**, *119*, 10438-10447.

Sewell, T.D.; Menikoff, R.; ***Bedrov, D***.; Smith G.D. " A Molecular Dynamics Simulation Study of Elastic Properties of HMX" *J. Chem. Phys*. **2003**, *119*, 7417-7426.

Smith, G.D., ***Bedrov, D***., Borodin, O., "A Molecular Dynamics Simulation Study of Hydrogen Bonding in Aqueous Poly(ethylene oxide) Solutions" *Phys. Rev. Lett*. **2000**, *85*, 5583-5586.

Smith, G.D., ***Bedrov, D***., Borodin, O., "Conformations and Chain Dimensions of Poly(ethylene oxide) in Aqueous Solution: A Molecular Dynamics Simulation Study" *J. Am. Chem. Soc*. **2000**, *122*, 9548-9549.