James F. Lutsko

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État civil

Né March 9, 1964.

Américain, Belge

Formation

B.A. Mathématiques (High Honors), Univ. of Florida, 1982.

B.S. Physique (High Honors), Univ. of Florida, 1982.

Ph.D. Physique, Univ. of Florida, 1986.

Expérience professionnelle

Chercheur, Centre Interdisciplinaire pour les Phénomènes Non-Linéaires et les Systèmes Complexes, Dépt. de Physique, Université Libre de Bruxelles, 2001-present.

Consultant technique et chef de l'équipe de développement, i2 Technologies (1997-2000).

Research group leader, Expert Systems Applications Development Group, Katholieke Univeriteit Leuven, Leuven, Belgium (1991-1997).

Chercheur, Université Libre de Bruxelles, Dept. of Physics (1989-1991).

Post-doc, Materials Science Division, Argonne National Laboratories (1987-1989).

Graduate Assistant, Dept. of Physics, Univ. of Fla. (1984-1987).

Publications

96 publications, 3098 citations, hindex: 30 que de Fev. 1, 2015
Liste de publication complète disponible à l'adresse: http://www.lutsko.com/publications.html

Publications: 2010-2015

Mechanism for the stabilization of protein clusters, James F. Lutsko and Grégoire Nicolis, submitted.

Unification of classical nucleation theories via unified ItÃt'-Stratonovich stochastic equation, Miguel A. Durán-Olivencia and James F. Lutsko, submitted.

Molecular theory of anomalous diffusion - Application to Fluorescence Correlation Spectroscopy, Jean Pierre Boon and James F. Lutsko, J. Stat. Phys. (to appear), 2015.

Mesoscopic impurities expose a nucleation-limited regime of crystal growth, Mike Sleutel, James F. Lutsko, Dominique Maes, and Alexander E. S. Van Driessche, *Phys. Rev. Lett.*, 114, 245501, 2015.

A Two-parameter Extension of Classical Nucleation Theory, James F. Lutsko and Miguel A. Durán-Olivencia, *J. Phys.: Cond. Mat.*, 27, 235101, 2015 (also highlighted in IOP Labtalk at http://iopscience.iop.org/0953-8984/labtalk-article/61329).

Mesoscopic nucleation theory for confined systems: a one parameter model, Miguel A. Durán-Olivencia and James F. Lutsko, *Phys. Rev. E*, 91, 022402, 2015.

Crystal Growth Cessation Revisited - the physical basis of step pinning, James F. Lutsko, Nélido González-Segredo, Miguel A. Durán-Olivencia, Dominique Maes, Alexander E.S. Van Driessche, and Mike Sleutel, *Crystal Growth and Design*, 14, 6129, 2014.

Observing classical nucleation theory at work by monitoring phase transitions with molecular precision, Mike Sleutel, Jim Lutsko, Alexander E. S. Van Driessche, Miguel A. Durán-Olivencia, and Dominique Maes, *Nature Communications* 5. 5598, 2014.

Comment on "Possible Divergences in Tsallis Thermostatistics" by Plastino A. and Rocca M. C., James F. Lutsko and Jean Pierre Boon, *EuroPhys. Lett.*, 107, 10003, 2014.

Nucleation of colloids and macromolecules in a finite volume, James F. Lutsko, *J. Chem. Phys.*, 137, 154903, 2012.

Nucleation of colloids and macromolecules: does the nucleation pathway matter?, J. Lutsko, *Journal of Chemical Physics* 136, 134402, 2012.

A dynamical theory of nucleation for colloids and macromolecules, J. Lutsko, *Journal of Chemical Physics* 136, 034509, 2012.

On the role of metastable intermediate states in the homogeneous nucleation of solids from solution, J. Lutsko, *Advances in Chemical Physics* 151, 137, 2012.

A microscopic approach to nonlinear Reaction-Diffusion: the case of morphogen gradient formation, J. P. Boon, J. Lutsko and C. Lutsko, *Physical Review E* 85, 021126, 2012.

A dynamical theory of homogeneous nucleation for colloids and macromolecules, J. Lutsko, *Journal of Chemical Physics*, 135, 161101, 2011.

Density functional theory of inhomogeneous liquids. IV. Squared-gradient approximation and classical nucleation theory, J. Lutsko, *Journal of Chemical Physics*, 134, 164501, 2011

Questioning the validity of non-extensive thermodynamics for classical Hamiltonian systems, J. Lutsko and J. P. Boon, *EuroPhysics Letters* , 95, 20006, 2011.

Nonextensive formalism and continuous Hamiltonian systems, J. P. Boon and J. Lutsko, *Physics Letters A*, 375, 329-334, 2011.

Phase behavior of a confined nanodroplet in the grand-canonical ensemble: the reverse liquidâĂŞvapor transition, J. Lutsko, J. Laidet and P. Grosfils, *J. Phys.: Cond. Matt.*, 22, 035101, 2010.

Low-Density/High-Density Liquid Phase Transition for Model Globular Proteins, P. Grosfils and J. Lutsko, *Langmuir*, 26, 8510-8516, 2010.

Kinetic rougheninglike transition with finite nucleation barrier, J. Lutsko, V. Basios, G. Nicolis, J. Kozak, M. Sleutel, and D. Maes, *Journal of Chemical Physics*, 132, 035102, 2010.

Recent Developments in Classical Density Functional Theory, J. Lutsko, *Advances in Chemical Physics*, 144, 2010.

Kinetics of intermediate-mediated self-assembly in nanosized materials: A generic model, J. Lutsko, V. Basios, G. Nicolis, T. Caremans, A. Aerts, J. Martens, C. Kirschhock, and T. van Erp, *Journal of Chemical Physics*, 132, 164701, 2010.

d'Autres Activités Professionnelles

Membre de l'American Physical Society.

Reviewer for Physical Review B, Physical Review E, Physical Review Letters, J. Statistical Physics, J. Chemical Physics, Europhysics Letters and many others.

Membre de comitè organisateur de la réunion internationale "Critical Phenomena and Collective Behavior of Multi-Particle Systems" (Bruxelles, 2012).

Membre du comitè d'organisation pour le WORKSHOP sur les "Kinetics and thermodynamics of multistep nucleation and self-assembly in nanosize materials" (Bruxelles, 2010).

Distinctions

Invited speaker at Solvay Workshop on "Multiscale Modelling at the PCB (Physics, Chemistry, Biology) interface" (Brussels, 26-28 April, 2016).

Invited speaker at Franqui Symposium on "The Aggregation of Biological Molecules: how physical chemistry illuminates physiology and pathophysiology" (Brussels, 4-6 June, 2015).

Invited speaker at Solvay Workshop on "Directional Nucleation and Growth of Molecular Cyrstals" (Brussels, 2014).

2011 Journal of Chemical Physics "Top 20 reviewer" (2012).

Invited speaker at American Physical Society March Meeting (Boston, 2012).

Invited speaker at workshop on "Kinetics and thermodynamics of multistep nucleation and self-assembly in nanosize materials" (Brussels, 2010).

Invited speaker at CECAM workshop "Common trends between Kinetic theory, Dynamical Density Functional methods and mesoscopic methods based on effective free energy models", (Lausanne, 2008).

Invited speaker at "Granular Fluids - A Proving Ground for Nonequilibrium Statistical Mechanics", (Seville, 2007).

Invited speaker at "Duftyfest", (Gainesville, 2005).

Invited speaker at "Computer Simulation in Materials Science", NATO ASI Series., (Aussois, 1991)

Invited speaker at Symposium "Atomistic Modelling in Material Science", ASM Mtg., (Chicago, 1988).

Reçu Université de Floride chapitre prix Sigma Xi pour "Outstanding Research as a Graduate Student" (1986-1987).

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