

GERGELY T. ZIMANYI

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Professional Preparation

Eötvös University, Budapest, Hungary	Physics	B.S. 1977-1982
Eötvös University, Budapest, Hungary	Physics	Ph.D. 1982-1985
KFA, Julich, Germany	Visiting Scientist	1985
SUNY at Stony Brook, NY	IBM Postdoctoral Fellow	1986-1988
Rutgers University, New Brunswick NJ	Postdoctoral Fellow	1988-1989

Appointments

University of California, Davis, CA	Professor	1997-present
University of California, Davis, CA	Associate Professor	1993-1997
University of California, Davis, CA	Assistant Professor	1989-1993

Recent Honors

Distinguished Teacher of UC Davis Award	2011
Fellow of the American Physical Society	2013
TEDx talk on nanotechnology: “Solving big problems with small tools”	2013

Synergistic Activities

1. Member of Review Board of large Research Center on solar energy	2012-2019
2. Founding Leader, Solar Advisory Board for CA Energy Commission	2007-2008
3. Leader of NSF Solar Collaborative, a 7-professor collaboration on solar cells	2009-2013
4. Leader of large-scale collaboration of close to 50 researchers of the University of California and the Los Alamos National Lab on vortex physics	2000-2004
5. Member of five-country collaboration with Toyota to develop a new generation of permanent magnets for the electric motor of the Toyota Prius hybrid car	2008-present

Selected Recent Publications

1. [*From Femtoseconds to Gigaseconds: The SolDeg Platform for the Performance Degradation Analysis of Silicon Heterojunction Solar Cells*](#), D. Unruh, R. Vatan Meidanshahi, C. Hansen, S. Manzoor, S.M. Goodnick, M.I. Bertoni, G.T. Zimanyi; *arXiv* **2012.01703**, (2021).
2. [*Hierarchical carrier transport simulator for defected nanoparticle solids*](#): C. Hansen, D. Unruh, M. Alba, C. Qian, A. Abelson, M. Law, G.T. Zimanyi; *Scientific Reports* (Nature group) **11**, 7458 (2021).
3. [*Disordered Mott-Hubbard Physics in Nanoparticle Solids: Transitions Driven by Disorder, Interactions and their Interplay*](#), D. Unruh, A. Camjayi, C. Hansen, J. Bobabilla, M. Rozenberg and G.T. Zimanyi; *Nano Lett.* **20**, 8569 (2020).
4. [*Structural characterization of a polycrystalline epitaxially-fused colloidal quantum dot superlattice by electron tomography*](#), X. Chu, H. Heidari, A. Abelson, D. Unruh, C. Hansen, C. Qian, G.T. Zimanyi, M. Law, A. Moule; *J. Mat. Chem. A*, **8**, 18254 (2020).
5. [*Commensuration effects in layered nanoparticle solids*](#), L. Qu, C. Hansen, M. Vörös, and G.T. Zimanyi; *Phys. Rev.* **B 101**, 045420 (2020).

6. [Multiscale model approaches to the design of advanced permanent magnets](#), S.C. Westmoreland, R.F.L. Evans, G. Hrkac, T. Schrefl, G.T. Zimanyi, M. Winklhofer, N. Sakuma, M. Yano, A. Kato, T. Shoji, A. Manabe, M. Ito, R.W. Chantrell; *Scripta Materialia* **148**, 56 (2018).
7. [Metal-Insulator Transition in Nanoparticle Solids: Insights from Kinetic Monte Carlo Simulations](#), L. Qu, M. Vörös, G.T. Zimanyi; *Scientific Reports* (Nature group) **7**, 7071 (2017).
8. [Colloidal Nanoparticles for Intermediate Band Solar Cells](#), M. Vörös, G. Galli, and G.T. Zimanyi; *ACS Nano*, **9**, 6882 (2015).
9. [Solar Nanocomposites with Complementary Charge Extraction Pathways for Electrons and Holes: Si Embedded in ZnS](#), S. Wippermann, M. Vörös, A. Gali, F. Gygi, G.T. Zimanyi, and G. Galli; *Phys. Rev. Lett.* **112**, 106801 (2014).
10. [High pressure core structures of Si nanoparticles for solar energy conversion](#), S. Wippermann, M. Vörös, D. Rocca, A. Gali, G.T. Zimanyi, and G. Galli; *Phys. Rev. Lett.* **110**, 046804 (2013).

Career Metrics

1. Papers: **143**, incl. **36** with impact factor higher than 8 (Physical Review Letters, Nano Letters)
2. Citations: more than **5,900**
3. h index: **44**
4. Grants: PI or co-PI on grants totaling more than **\$5M**
5. Invited talks, seminars, colloquia: more than **100**, incl. at Harvard, Stanford, and Yale
6. Graduates of my group: **10** got professor/academic research positions, **5** in high tech