Curriculum Vitae

PERSONAL DATA

Name: Imad H. A. Ladadwa
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EDUCATION

1997 – 2000	Ph.D. in Theoretical and Computational Atomic Physics, Department of Physics and Technology, University of Bergen, Norway Dissertation title: "*Aspects of atomic Structure in atomic Collisions*"
1996 – 1997	Master degree in Theoretical and Computational Atomic Physics, Department of Physics and Technology, University of Bergen, Norway
1990 – 1996	Bachelor degree in Physics (with distinction), Birzeit University, Palestine

EXPERIENCE

Sep. 2008 – present	Assistant Professor of Physics "Fahd Bin Sultan University, Tabuk, Saudi Arabia."
July 2007–Nov. 2008	Assistant Professor of Physics, Birzeit University, West Bank
Nov. 2006–Nov. 2008	eLearning Project Manager, HULUL Business Solutions, West Bank.
May 2002–Jan 2006	Post Doctoral researcher at Goettingen University, Germany.
March 2001–May 2002	Assistant Professor of Physics, Birzeit University, West Bank

RESEARCH VISITS

06/2012–8/2019	Guest researcher at Muenster University, Germany.
07/2012–9/2012	Guest researcher at Muenster University, Germany.
07/2009–9/2009	Guest researcher at Muenster University, Germany.
08/2006–10/2006	Guest researcher at Goettingen University, Germany.
05/1999–11/1999	Exchange visitor at the Department of Chemistry, Purdue University, USA.

RESEARCH INTERESTS

In my current research activities, I am considering the metallic glass materials; the focus is on dynamical heterogeneity which is considered as a fundamental aspect characterizing the processes that lead to the dramatic slowing-down of structural dynamics in supercooled liquids and glasses. For metallic alloy system, a detailed answer concerning the origin of heterogeneity is still opened, therefore, and in order to approach this question, we carry out molecular dynamics simulations for an amorphous $Ni_{0.5}Zr_{0.5}$ model, generating a well relaxed structures at many different temperatures well below the dynamical glass temperature $T_c = 1120K$ for this system. We then try to uncover the link between the tendency of atoms for becoming mobile or remaining immobile and specific structural features of the configurations.

PUBLILCATIONS

- J. Bewerunge, I. Ladadwa, F. Platten, C. Zunke, A. Heuer, S.U. Egelhaaf. Time- and ensemble-averages in evolving systems: the case of Brownian particles in random potentials. Phys. Chem. Chem. Phys. 18, 18887--18895 (2016)
- Florian Evers, Christoph Zunke, Richard D. L. Hanes, Jörg Bewerunge, Imad Ladadwa, Andreas Heuer, and Stefan U. Egelhaaf . Particle dynamics in two-dimensional random-energy landscapes: Experiments

and simulations. Phys. Rev. E **88**, 022125 (2013)

- I. Ladadwa and A. Heuer. Nonlinear response and crowding effects in microrheology. Phys. Rev. E **87**, 012302 (2013)
- F. Evers, R.D.L. Hanes, C. Zunke, R.F. Capellmann, J. Bewerunge, C. Dalle-Ferrier, M.C. Jenkins, I. Ladadwa, A. Heuer, R. Castaneda-Priego, S.U. Egelhaaf. Colloids in light fields: Particle dynamics in random and periodic energy landscapes. Eur. Phys. J. Special Topics **222**, 2995–3009 (2013)
- Ladadwa and H. Teichler. Transient dynamical clusters in simulated amorphous Ni0.5Zr0.5 around the glass temperature. Phys. Rev. E. **78**, 041503 (2008)
- Ladadwa and H. Teichler. Low-frequency dynamical heterogeneity in simulated amorphous Ni0.5Zr0.5 below its glass temperature: correlations with cage volume and local order fluctuations. Phys. Rev. E. **73**, 031501 (2006)
- Ladadwa and H. Teichler. Dynamical heterogeneities in simulated amorphous Ni0.5Zr0.5: correlations with density and order parameter fluctuations. German Physical Society, Regensburg, (DF 4.3 & DY 29.3), 8.-12. March (2004)
- L. Kocbach and I. Ladadwa. Ionization channel in non-perturbative ion-atom collisions dominated by charge exchange. Application of accelerators in research and industry, ed. by J.L. Duggan and I. L. Morgan, AIP Conf. Proc., Vol **576**, pp. 68-71 (2001)
- I. Ladadwa and S. Kais. Critical Behavior of Electron Impact Ionization of Atoms. Int. J. Quant. Chem. **80**, 575 (2000).
- J.P. Hansen, L. Kocbach, and I. Ladadwa. Ionization in slow collisions of protons with atomic oxygen, ed. Y. Itikawa et al, Sendai, Japan, XXI. ICPEAC, **Vol II**, p. 478 (1999)
- L. Kocbach and I. Ladadwa. Ionization in ion-atom collisions with strong charge exchange channel. Photonic, Electronic and Atomic Collisions (XXII ICPEAC) Proceedings, ed. by J.L. Duggan et al. **XXII**. ICPEAC, p. 453 (2001)
- Ladadwa. Generation of Numerical Codes for Evaluation of Atomic Scattering Quantities by Computer Algebra Systems. IMACS ACA'98 Electronic Proceedings, Applications of Computer Algebra, Electronic Proceedings Papers (1998).

PRESENTATIONS

- Deutsche Gesellschaft für Kristallographie**,** Bridging the Scales in Glasses, Dusseldorf, July 18–20, 2012 Germany (talk contribution)
- German Physical Society (DPG), Dynamic and statistical physics, 8.-12. March 2004 Germany (talkcontribution)
- Nordplus Mountain meeting, atomic physics, 17.-19. Nov. 2000 Norway (talk contribution)
- Nordplus Mountain meeting, atomic physics, 27.-29. Jan. 2000 Norway (talk contribution)
- Midwest Theoretical Chemistry Conference, 20.-22. May. 1999 University of Notre Dame. South Bend, Indiana, USA.
- 1998 IMACS Conference on Applications of Computer Algebra, August 9-11, 1998 Prague, CzechRepublic (talk contribution)
- Laser-Atom Conference in University of Lund, Nov.15,1997, Lund/Sweden (poster contribution)
- Nordplus Mountain meeting, atomic physics, 28-30 Nov. 1996 Norway

TEACHING

Courses Taught:

- General Physics, General Physics Laboratory, Atomic Physics, Thermodynamics and Statistical Physics, Classical Dynamics, Introduction to Astronomy

AFFILIATIONS

- German Physical Society, member, 2004-2005.

AWARDS

- Postdoctoral fellowship: 2002 - 2006.
- Norwegian state educational fellowship for graduate research: 1996-2000.
- Musa Nasir fellowship for physics: 1991-1996.