

CURRICULUM VITAE

University of Wisconsin-Madison

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EDUCATION

11/27/1999	PhD-Title of the thesis: “ <i>Relaxation Phenomena in the Thz Dynamics of Simple Fluid Probed by Inelastic X-ray Scattering</i> ” Advisor: Dr F. Sette	Department of Physics	University Joseph Fourier Grenoble, France
12/16/1994	Italian “Laurea” Degree (equivalent to Master’s Degree) Title of the thesis: “ <i>Brillouin Spectra and Relaxation Phenomena in Supercooled Water</i> ” Advisor: Prof M. Nardone	Department of Physics	University “La Sapienza” Rome, Italy

PROFESSIONAL EXPERIENCE

2021-2023	Title: Teaching Faculty	Department of Physics	University of Wisconsin at Madison
2020-2021	Title: Senior Scientist	Department of Physics	University of Wisconsin at Madison
2009- 2020:	Title: Physicist (continuing appointment) Role: beamline scientist at the high-resolution IXS beamline of the synchrotron source N II at Brookhaven National Laboratory	Department: Photon Science Division	Brookhaven National Laboratory, Upton, NY
2008-2009	Title: Physicist Role: beamline scientist at the high-resolution IXS beamline of the <i>Advanced Photon Source</i>	Department: X-Ray Science Division	Argonne National Laboratory Lemont, IL

2003- 2008	Title: Scientist (tenured) Role: instrument scientist of BRISP (BRillouin SPectrometer) at the Institut Laue-Langevin (ILL)	Department: Experiment Division Group: “Time Flight and high-resolution spectrometers”	Employed by INFM-CNR (National Institute for the Physics of Matter, later merged into National Council for Research)
2001-2003	Title: Assistant Scientist Role: researcher at the HIREUV (HIgh Resolution UV) spectrometer	Department of Physics	University of L’Aquila, L’Aquila, Italy
1999-2001	Title: Assistant Scientist Role: responsible for the high pressure facility of the laboratory “ <i>Brillouin and Raman spectroscopy on liquids</i> ”	Department of Physics	University “Roma III” Rome, Italy
1995-1999	Title: PhD Student Role: execute my PhD research activity at the beamline <i>ID1</i>	Experimental Division	<i>European Synchrotron Rad Facility (ESRF)</i> Grenoble, France
1999-2001	Title: Assistant Scientist Role: responsible for the high-pressure facility of the laboratory “ <i>Brillouin and Raman spectroscopy on liquids</i> ”	Department of Physics	University “Roma III” Rome, Italy
1995-1999	Title: PhD Student Role: execute my PhD resea activity at the beamline <i>ID16</i>	Experimental Division	<i>European Synchrotron Rad Facility (ESRF)</i> Grenoble, France
1995	Title: Research assistant (6 months contract) Role: develop a low noise γ -Ray detector	Research Division	<i>A.N.P.A. (National Agency for Environmental Protection)</i> Rome, Italy

RESEARCH PROJECTS AND GRANTS

2023: Ray MacDonald Proposals fund at UW-Madison. Title of the Project: *Shaping high frequency sound propagation with novel nanoarchitectures*. Awarded amount: \$27,000.

Role: Project leader

2022: Fall Research Competition grant- Title: *Probing Phonon Manipulation in 3D Phononic Crystals by Inelastic X-ray Scattering and Femtosecond Core-Level Spectroscopy*. Awarded amount: \$54,833.

Role: Project leader

2009-2019: project for the development of an extremely high-resolution IXS beamline at the new synchrotron source NSLS-II of Brookhaven National Laboratory. Cost of the project: \$11.107M (baseline scope) plus \$4.8M (mature scope).

Role: Beamline scientist

Project Leader: Dr Y. Cai.

2015-2017 LDRD (*Laboratory-Directed Research & Development*) project entitled: *“Inelastic X-ray Scattering determination of the inter- and intra-particle dynamics of nano-particle super-lattices: key to the development of THz phononic crystals”* Awarded amount: \$282,667.

Role: Principal investigator (P.I.)

2009: Joint USA-UK project for the construction of a .1 meV spectrometer as a collaboration between the *Advanced Photon Source* at *Argonne National Laboratory* and the UK synchrotron *DIAMOND*; Awarded amount: \$900,000.

Role: co-proposer

Project leader: Dr Y. Shvyd'ko

2009- Project for the development of an IXS spectrometer using position sensitive detector, LDRD proposal at *Argonne National Laboratory*; Awarded amount: \$80,000.

Role: co-proposer

Project leader: Dr Y. Shvyd'ko

2004-2005: Project for the development of a new-concept high pressure, large-volume cell optimized for neutron scattering experiments. Funding agency: *INFM*. Awarded amount: \$12,000.

Role: P.I.

2003-2007: Project for the construction of a novel time of flight spectrometer, BRISP”, the instrument is now operative and available for the scientific community at ILL, Grenoble, France. It was developed due to a collaborative venture between *INFM-CNR* (Italy), the “*Technical University of Chemnitz*” (Germany) and the “*Philipps University of Marburg*” (Germany). Cost of the project: \$ 3.5M.

Role: Instrument scientist

Project leaders: Profs. F. Sacchetti and C. Petrillo (*INFM-CNR* and *Universita' di Perugia*, Italy), Prof. J.-B. Suck (*Technical University of Chemnitz*) and Prof. W. C. Pilgrim (*Philipps University of Marburg*)

1999-2001 Project for the development of a high-pressure facility at the “*Brillouin and Raman scattering of liquids*” at the University of “*Roma III*”.

Role: Technical responsible

Project leader: Prof. M. Nardone

1996-1997: Project for the development of a high pressures/high and low-temperatures setup for the study of the Inelastic X-Ray Scattering spectrum of liquids and gases at the beamline ID16 of the European Synchrotron Radiation Facility, ESRF, Grenoble France. Funding source: ESRF. Estimated cost of the project: \$120,000.

Role: Technical responsible

TEACHING AND SUPERVISION ACTIVITY

2020-2023	Teaching Faculty Physics Department University of Wisconsin-Madison Courses taught	PHY 307: Intermediate Laboratory of Mechanics and Modern Physics PHY 407: Advanced Laboratory of Modern Physics PHY 623: Electronic Aids to Measurements PHY 625: Applied Optics PHY 707: Laboratory of Quantum Computing PHY 499: Advanced-level Mentored Research Project in Physics.
2010-2013	Adjunct Professor Physics Department State University of New York Stony Brook, Stony Brook, NY Courses taught:	PHY 131: Classical Physics I, recitation classes PHY 132: Classical Physics II, recitation classes PHY 598: Graduate Seminar in AMO (Atomic Molecular and Optical) Physics and Condensed Matter Physics
2002	Lecturer	

Department of Environmental Sciences
University of Viterbo,
Viterbo, Italy
Courses taught:

General Physics I and II

2001
Instructor
Department of Physics
University of L'Aquila,
L'Aquila, Italy
Course taught:

General Physics II

1999-2001
Teaching Assistant
Department of
Physics University
"Roma III" Rome,
Italy
Course taught:

Spectroscopy

Thesis Advisor, Co-advisor or Mentor

2001-2002: University "Roma III", Rome, Italy
Students: Giorgia Tordini and Emiliano Piselli
University of L'Aquila, L'Aquila, Italy
Students: Ramon Gimenez de Lorenzo and
Andrea Giugni

2003-2007: University Joseph Fourier, Grenoble, France
Student: Filippo Bencivenga
University of Rome "La Sapienza", Rome,
Italy Student: Mario Zappadu
University of Trento, Trento, Italy
Student: Laura Orsingher

PUBLICATIONS

(current *H*-index: 29)

REFEREED JOURNAL PUBLICATIONS

1. **A. Cunsolo** and M. Nardone, “*Velocity Dispersion and Viscous Relaxation in Supercooled Water*”, *Journal of Chemical Physics* **105**, 3911-3917 (1996).’
2. C. Masciovecchio, G. Ruocco, F. Sette, P. Benassi, **A. Cunsolo**, M. Krisch, V. Mazzacurati, A. Mermet, G. Monaco and R. Verbeni, “*High-Frequency Propagating Modes in Vitreous Silica at 295 K*”, *Physical Review B* **55**, 8049-8051 (1997).
3. C. Masciovecchio, G. Monaco, G. Ruocco, F. Sette, **A. Cunsolo**, M. Krisch, A. Mermet, M. Soltwisch and R. Verbeni, “*High Frequency Dynamics of Glass Forming Liquids at the Glass Transition*”, *Physical Review Letters* **80**, 544-547 (1998).
4. **A. Cunsolo**, G. Pratesi, G. Ruocco, M. Sampoli, F. Sette, R. Verbeni, F. Barocchi, M. Krisch, C. Masciovecchio and M. Nardone, “*Dynamics of Dense Supercritical Neon at the Transition from Hydrodynamical to Single-Particle Regimes*”, *Physical Review Letters* **80**, 3515-3518 (1998).
5. A. Mermet, **A. Cunsolo**, E. Duval, M. Krisch, C. Masciovecchio, S. Pergem, G. Ruocco, F. Sette, R. Verbeni and G. Viliani, “*Pressure-Induced In-Glass Structural Transformation in the Amorphous Polymer Poly(Methylmethacrylate)*”, *Physical Review Letters* **80**, 4205-4208 (1998).
6. **A. Cunsolo**, G. Ruocco, F. Sette, C. Masciovecchio, A. Mermet, G. Monaco, M. Sampoli and R. Verbeni, “*Experimental Determination of the Structural Relaxation in Liquid Water*”, *Physical Review Letters* **82**, 775-778 (1999); see also Erratum: *Physical Review Letters* **82**, 2810 (1999).
7. G. Monaco, **A. Cunsolo**, G. Ruocco and F. Sette, “*Viscoelastic Behavior of Water in the Terahertz-Frequency Range: An Inelastic X-Ray Scattering Study*”, *Physical Review E* **60**, 5505-5521 (1999).
8. A. Scopigno, U. Balucani, **A. Cunsolo**, C. Masciovecchio, G. Ruocco and F. Sette, “*Inelastic X-ray Scattering Determination of the Dynamic Structure Factor of Liquid Lithium*”, *Philosophical Magazine B* **79**, 2027-2035 (1999).
9. C. Masciovecchio, V. Mazzacurati, G. Monaco, G. Ruocco, T. Scopigno, F. Sette, P. Benassi, **A. Cunsolo**, A. Fontana, M. Krisch, A. Mermet, M. Montagna, F. Rossi, M. Sampoli, G. Signorelli and R. Verbeni, “*Acoustic Nature of the Boson Peak in Vitreous Silica*”, *Philosophical Magazine B* **79**, 2013-2020 (1999).
10. **A. Cunsolo**, G. Pratesi, G. Ruocco, M. Sampoli, F. Sette, R. Verbeni, F. Barocchi, M.H. Krisch, C. Masciovecchio and M. Nardone, “*Is There Any Evidence of Relaxation in the High Frequency Dynamics of Noble Gases?*”, *Journal of Physics and Chemistry of Solids* **61**, 477-483 (2000).
11. F. Sette, G. Ruocco, **A. Cunsolo**, C. Masciovecchio, G. Monaco and R. Verbeni, “*Determination of the Short-Wavelength Propagation Threshold in the Collective Excitations of Liquid Ammonia*”, *Physical Review Letters* **84**, 4136-4139 (2000).
12. O. Pilla, **A. Cunsolo**, A. Fontana, C. Masciovecchio, G. Monaco, M. Montagna, G. Ruocco, T. Scopigno and F. Sette, “*Nature of the Short Wavelength Excitations in Vitreous Silica: an X-Ray Brillouin Scattering Study*”, *Physical Review Letters* **85**, 2136-2139 (2000).
13. T. Scopigno, U. Balucani, **A. Cunsolo**, Masciovecchio, G. Ruocco, F. Sette and R. Verbeni, “*Phonon-Like and Single-Particle Dynamics in Liquid Lithium*”, *Europhysics Letters* **50**, 189-195 (2000).
14. **A. Cunsolo**, G. Pratesi, R. Verbeni, G. Monaco, C. Masciovecchio, F. Sette, D. Colognesi and G. Ruocco, “*Microscopic Relaxation in Supercritical and Liquid Neon*”, *Journal of Chemical Physics* **114**, 2259-2267 (2001).
15. R. Senesi, C. Andreani, D. Colognesi, **A. Cunsolo** and M. Nardone, “*Deep-Inelastic Neutron Scattering Determination of the Single-Particle Kinetic Energy in Solid and Liquid ³He*”, *Physical Review Letters* **86**, 4584-4587 (2001).
16. R. Verbeni, G. Pratesi, **A. Cunsolo**, G. Monaco, F. Rosica, C. Masciovecchio, M. Nardone, G. Ruocco, F. Sette and F. Albergamo, “*Quantum Effects in the Dynamics of He Probed by Inelastic X Ray*

- Scattering*”, Physical Review E **64**, 021203/1-8 (2001).
17. G. Monaco, **A. Cunsolo**, G. Pratesi, F. Sette and R. Verbeni, “*Deep Inelastic Atomic Scattering of X Rays in Liquid Neon*”, Physical Review Letters **88**, 227401/1-4 (2002).
 18. **A. Cunsolo**, G. Pratesi, D. Colognesi, R. Verbeni, F. Sette, G. Ruocco and M. Nardone, “*Microscopic Structure and Collective Modes in Liquid Hydrogen: a Preliminary Inelastic X Ray Scattering Study*”, Philosophical Magazine B **82**, 305-312 (2002).
 19. M. Krisch, P. Loubeyre, G. Ruocco, F. Sette, **A. Cunsolo**, M. D’Astuto, R. LeToullec, M. Lorenzen, A. Mermet, G. Monaco and R. Verbeni, “*Pressure Evolution of the High-Frequency Sound Velocity in Liquid Water*”, Physical Review Letters **89**, 125502/1-12 (2002).
 20. **A. Cunsolo**, G. Pratesi, D. Colognesi, R. Verbeni, M. Sampoli, F. Sette, G. Ruocco, R. Senesi, M. Krisch and M. Nardone, “*Microscopic Structure in Liquid Hydrogen and Deuterium: An X-Ray Scattering Study*”, Journal of Low Temperature Physics **129**, 117-131 (2002).
 21. **A. Cunsolo**, G. Monaco, G. Pratesi, R. Verbeni and M. Nardone, “*Transition from the Collective to the Single Particle Regimes in a Quantum Fluid*”, Physical Review B **67**, 024507 (2003).
 22. G. Venturi, E. Guarini, F. Formisano, A. Orecchini, **A. Cunsolo**, C. Petrillo, F. Sacchetti and F. Barocchi, “*Optimizing the Setup of the BRISP Spectrometer by Sprgraded McStas Simulations*”, Journal of Neutron Research **11**, 165-178 (2003).
 23. F. Formisano, E. Guarini, A. Orecchini, **A. Cunsolo**, S. Jahn, G. Venturi, F. d’Anca, T. Gahl, A. Laloni, F. Barocchi, C. Petrillo, F. Sacchetti and J.-B. Suck, “*Progress on the Construction of the Thermal Neutron Scattering Spectrometer BRISP*”, Physica B **350**, E795-E797 (2004).
 24. P. Benassi; **A. Cunsolo**; R. Eramo; A. Giugni; M. Nardone and M. Sampoli, “*Ultraviolet Brillouin Spectroscopy of Glass-Forming Glycerol*”, Philosophical Magazine B **84**, 1413-1422 (2004).
 25. F. Barocchi, J.B. Suck, D. Aisa, E. Babucci, **A. Cunsolo**, T. Gahl, S. Jahn, F. Formisano, A. Orecchini, C. Petrillo and F. Sacchetti, “*The Development of the BRISP Spectrometer at the Institut Laue-Langevin*”, Nuclear Instruments and Methods in Physics Research A **544**, 620-642 (2005).
 26. E. Pontecorvo, M. Krisch, **A. Cunsolo**, G. Monaco, A. Mermet, R. Verbeni, F. Sette and G. Ruocco, “*High Frequency Longitudinal and Transverse Dynamics in Water*”, Physical Review E **71**, 011501 (2005).
 27. **A. Cunsolo**, D. Colognesi, M. Sampoli, R. Senesi and R. Verbeni, “*Signatures of Quantum Behaviors in the Microscopic Dynamics of Liquid Hydrogen and Deuterium*”, Journal of Chemical Physics **123**, 114509 (2005).
 28. D. Aisa, E. Babucci, F. Barocchi, **A. Cunsolo**, F. D’Anca, A. De Francesco, F. Formisano, T. Gahl, E. Guarini, S. Jahn, A. Laloni, H. Mutka, A. Orecchini, C. Petrillo, F. Sacchetti, J.-B. Suck, G. Venturi, “*BRISP – A New Thermal Neutron Brillouin Scattering Spectrometer at the Institut Laue- Langevin*”, Notiziario Neutroni e Luce di Sincrotrone **10**, 20-31, (2005).
 29. D. Aisa, E. Babucci, F. Barocchi, **A. Cunsolo**, F. D’Anca, A. De Francesco, F. Formisano, T. Gahl, E. Guarini, S. Jahn, A. Laloni, H. Mutka, A. Orecchini, C. Petrillo, F. Sacchetti, J.-B. Suck and G. Venturi, “*BRISP: A New Thermal-Neutron Spectrometer for Small-Angle Studies of Disordered Matter*”, Journal of Non-Crystalline Solids **352**, 5130-5135 (2006).
 30. D. Aisa, S. Aisa, E. Babucci, F. Barocchi, **A. Cunsolo**, F. D’Anca, A. De Francesco, F. Formisano, T. Gahl, E. Guarini, S. Jahn, A. Laloni, H. Mutka, A. Orecchini, C. Petrillo, W.C. Pilgrim, A. Piluso, F. Sacchetti, J.B. Suck and G. Venturi, “*The Brillouin Spectrometer BRISP at the ILL*”, Physica B: Condensed Matter **385-386**, 1092-1094 (2006).
 31. A. Giugni and **A. Cunsolo**, “*Structural Relaxation in the Dynamics of Glycerol: A joint Visible, UV and X Ray Inelastic Scattering Study*”, Journal of Physics: Condensed Matter **18**, 889-902, (2006).
 32. F. Bencivenga, **A. Cunsolo**, M. Krisch, G. Monaco, G. Ruocco and F. Sette, “*Adiabatic and Isothermal Sound Waves: The Case of Supercritical Nitrogen*”, Europhysics Letters **75**, 70-76 (2006).
 33. **A. Cunsolo**, A. Orecchini, C. Petrillo and F. Sacchetti, “*Quasielastic Neutron Scattering Investigation of the Pressure Dependence of Molecular Motions in Water*”, Journal of Chemical Physics **124**, 084503 (2006).
 34. **A. Cunsolo**, A. Orecchini, C. Petrillo and F. Sacchetti, “*Pressure Evolution of Microscopic Diffusion*

- in Liquid Water*”, Journal of Neutron Research **14**, 309-315 (2006).
35. D. Aisa, S. Aisa, E. Babucci, F. Barocchi, **A. Cunsolo**, F. D’Anca, A. De Francesco, F. Formisano, T. Gahl, E. Guarini, S. Jahn, A. Laloni, H. Mutka, A. Orecchini, C. Petrillo, W.C. Pilgrim, A. Piluso, F. Sacchetti, J.B. Suck and G. Venturi, “*Towards the Commissioning Phase of the BRILLIQUIN Spectrometer BRISP*”, Journal of Neutron Research **14**, 367–372 (2006).
 36. F. Bencivenga, **A. Cunsolo**, M. Krisch, G. Monaco, G. Ruocco and F. Sette, “*The High Frequency Dynamics of Supercritical Nitrogen*”, Philosophical Magazine B **87**, 665-671 (2007).
 37. F. Bencivenga **A. Cunsolo**, M. Krisch, G. Monaco, L. Orsingher, G. Ruocco, A. Vispa and F. Sette, “*Structural and Collisional Relaxations in Liquids and Supercritical Fluids*”, Physical Review Letters **98**, 085501 (2007).
 38. F. Bencivenga, **A. Cunsolo**, M. Krisch, G. Monaco, G. Ruocco and F. Sette, “*High Frequency Dynamics of Liquid and Supercritical Water*”, Physical Review E **75**, 051202 (2007).
 39. **A. Cunsolo**, A. Orecchini, C. Petrillo and F. Sacchetti, “*On the Anomalous Behavior of Microscopic Diffusion in Liquid Water*”, Journal of Physics: Condensed Matter **19**, 415118 (2007).
 40. F. Bencivenga, **A. Cunsolo**, M. Krisch, G. Monaco, G. Ruocco and F. Sette, “*High Frequency Dynamics in Liquids and Supercritical Fluids: A Comparative IXS Study*”, Journal of Chemical Physics **130**, 064501 (2009).
 41. F. Sacchetti, A. Orecchini, **A. Cunsolo**, F. Formisano, and C. Petrillo, “*Coherent Neutron Scattering Study of Confined Water in Nafion*”, Physical Review B **80**, 024306 (2009).
 42. **A. Cunsolo**, F. Formisano, C. Ferrero, F. Bencivenga and S. Finet, “*Pressure Dependence of the Large-Scale Structure of Water*”, Journal of Chemical Physics **131**, 194502 (2009).
 43. D. Reznik, K. Lokshin, D. C. Mitchell, D. Parshall, W. Dmowski, D. Lamago, R. Heid, K. -P. Bohnen, A. S. Sefat, M. A. McGuire, B. C. Sales, D. G. Mandrus, A. Subedi, D. J. Singh, A. Alatas, M. H. Upton, A. H. Said, A. Cunsolo, Yu. Shvydko and T. Egami, “*Phonons in Doped and Undoped BaFe₂As₂ Investigated by Inelastic X-Ray Scattering*”, Physical Review B **80**, 214534 (2009).
 44. Y. Shvyd’ko, S. Stoupin, **A. Cunsolo**, A. H. Said and X. Huang, “*High-Reflectivity High-Resolution X-ray Crystal Optics with Diamonds*”, Nature Physics **6**, 196-199 (2010).
 45. **A. Cunsolo**, A. Orecchini, C. Petrillo and F. Sacchetti, “*Interplay Between Microscopic Diffusion and Local Structure of Water*”, Journal of Physical Chemistry B **114**, 16713–16717 (2010).
 46. M. G. Izzo, F. Bencivenga, **A. Cunsolo**, S. Di Fonzo, R. Verbeni and R. Gimenez De Lorenzo, “*The Single Particle Dynamics of Iodine in the Sachs Teller Regime: An Inelastic X-Ray Scattering Study*”, Journal of Chemical Physics **133**, 124514 (2010).
 47. **A. Cunsolo**, B. M. Leu, A. H. Said and Y. Q. Cai, “*Structural and Microscopic Relaxations in Glycerol: An IXS Study*”, Journal of Chemical Physics **134**, 184502 (2011).
 48. M. G. Izzo, F. Bencivenga, A. Gessini, **A. Cunsolo** and C. Masciovecchio, “*A Viscoelastic Analysis of IXS Spectra from He/Ne Mixtures*”, Philosophical Magazine **91**, 1767-1775 (2011).
 49. Y. P. Stetsko, J. W. Keister, D. S. Coburn, N. Kodituwakku, **A. Cunsolo** and Y. Q. Cai, “*Multiple-Wave Diffraction in High-Energy-Resolution X-Ray Backscattering Optics*”, Physical Review Letters **107**, 155503 (2011).
 50. F. Bencivenga and **A. Cunsolo**, “*The Dispersive Behavior of Collective Excitations in Fluids: An Experimental Test for the Generalized Collective Modes Theory*”, Journal of Chemical Physics **136**, 114508 (2012).
 51. **A. Cunsolo**, C. N. Kodituwakku, F. Bencivenga, M. Frontzek B. M. Leu and A. H. Said “*Transverse Dynamics of Water Across the Melting: A Parallel Neutron and X Ray Inelastic Scattering Study*”, Physical Review B **85**, 174305 (2012).
 52. **A. Cunsolo**, “*On the Absence of a Positive Sound Dispersion in the THz Dynamics of Glycerol: an Inelastic X ray Scattering Study*”, Journal of Physics: Condensed Matter, **24**, 375104 (2012).
 53. **A. Cunsolo**, “*Onset of a Transverse Dynamics in the THz Spectrum of Water*”, Molecular Physics **111**, 455-463 (2013).

54. **A. Cunsolo**, N. Kodituwakku, B.M. Leu, A. H. Said, “*Shear Propagation in the Terahertz Dynamics of Water-Glycerol Mixtures*”, *Journal of Chemical Physics* **139**, 184507 (2013).
55. K. Smith, J. Poulsen, **A. Cunsolo**, and P. Rossky “*Refinement of the Experimental Dynamic Structure Factor for Liquid Para-Hydrogen and Ortho-Deuterium Using Semi-classical Quantum Simulation*”, *Journal of Chemical Physics* **140**, 034501 (2014).
56. A. Suvorov, D. S. Coburn, **A Cunsolo**, J. W. Keister, M. H. Upton, Y. Q. Cai, “*Performance of a Collimating L-shaped Laterally Graded Multilayer Mirror for the Ixs Analyzer System at NSLS-II*” *Journal of Synchrotron Radiation* **21**, 473-478 (2014).
57. K. Smith, J. Poulsen, G. Nyman, **A. Cunsolo**, and P. Rossky. “*Application of a New Ensemble Conserving Quantum Dynamics Simulation Algorithm to Liquid Para-Hydrogen and Ortho-Deuterium*”, *Journal of Chemical Physics* **142**, 244113 (2015).
58. **A. Cunsolo**, “*The THz Spectrum of Density Fluctuations of Water: The Viscoelastic Regime*”, *Advances in Condensed Matter Physics* **2015**, 1-24 (2015).
59. D. Bolmatov, M. Zhernenkov, D. Zav’yalov, S. Stoupin, Y. Q. Cai, and **A. Cunsolo**, “*Revealing the Mechanism of the Viscous-to-Elastic Crossover in Liquids*”, *Journal of Physical Chemistry Letters* **6**, 3048–3053 (2015).
60. **A. Cunsolo**, “*The THz Spectrum of Density Fluctuations of Water: The Viscoelastic Regime*”, *Advances in Condensed Matter Physics* **2015**, 1-24 (2015).
61. **A. Cunsolo**, Yan Li, C. N. Kodituwakku, S. Wang, D. Antonangeli, F. Bencivenga, A. Battistoni, R. Verbeni, S. Tsutsui, A. Q. R. Baron, H.-K. Mao, D. Bolmatov, Y. Q. Cai, “*Signature of a Polyamorphic Transition in the THz Spectrum of Vitreous GeO₂*” *Scientific Reports* **5**, 14996 (2015).
62. D. Bolmatov, M. Zhernenkov, D. Zav’yalov, S. Tkachev, **A. Cunsolo**, Y. Q. Cai, “*The Frenkel Line: A Direct Experimental Evidence for the New Thermodynamic Boundary*”, *Scientific Reports* **5**, 15850 (2015).
63. A. Suvorov, **A. Cunsolo**, O. Chubar, Y. Cai, “*Ultra High Energy Resolution Focusing Monochromator for Inelastic X-ray Scattering Spectrometer*”, *Optics Express* **23**, 31607-31618 (2015).
64. **A. Cunsolo**, A. Suvorov, Y. Q. Cai, “*The Onset of Shear Modes in the High Frequency Spectrum of Simple Disordered Systems: Current Knowledge and Perspectives*”, *Philosophical Magazine*, **96**, 732-742 (2016).
65. D. Bolmatov, M. Zhernenkov, Dmitry Zav’yalov, Stanislav Stoupin, **A. Cunsolo**, Y. Q. Cai, “*Thermally Triggered Phononic Gaps in Liquids*”, *Scientific Reports* **6**, 19469 (2016).
66. **A. Cunsolo**, “*The Spectrum of Density Fluctuations of Noble Gases Probed by THz Neutron and X-Ray Spectroscopy*”, *Applied Sciences* **6**, 64 (2016).
67. M. Zhernenkov, D. Bolmatov, D. Soloviov, K. Zhernenkov, B. P. Toperverg, **A. Cunsolo**, A. Bosak, and Y. Cai, “*Revealing the Mechanism of Passive Transport in Lipid Bilayers via Phonon-Mediated Nanometer-Scale Density Fluctuations*”, *Nature Communications* **7**, 11575 (2016).
68. D. Bolmatov, M. Zhernenkov, D. Zav’yalov, Y.Q. Cai, **A. Cunsolo**, “*Terasonic Excitations in 2D Gold Nanoparticle Arrays in a Water Matrix as Revealed by Atomistic Simulations*”, *Journal of Physical Chemistry C* **120**, 19896–19903 (2016).
S. Bellissima, S. De Panfilis, U. Bafile, **A. Cunsolo**, M. A. Gonzalez, E. Guarini, F. Formisano, “*The Hydrogen-Bond Collective Dynamics in Liquid Methanol*”, *Scientific Reports* **6**, 39533 (2017).
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