

List of publications of Claudio Verdozzi

Submitted articles

A. A. Sapozhnik, B. Truc, P. Tengdin, S. Gargiulo, I. Madan, T. LaGrange, F. Carbone, T. Schönenberger, H. M. Rønnow, A. Magrez, E. Viñas Boström, A Rubio, C. Verdozzi, *Observation of a new light-induced skyrmion phase in the Mott insulator Cu_2OSeO_3* , submitted

Peer-reviewed articles

61. Z. Zhao, C. Verdozzi, and F. Aryasetiawan, *A Green's function method for the two-dimensional frustrated spin-1/2 Heisenberg magnetic lattice*, Phys. Rev. B **106**, 184417 (2022).
60. E. Viñas Boström, A. Rubio and C. Verdozzi, *Microscopic Theory of Light-Induced Ultrafast Skyrmion Excitation in Transition Metal Films*, npj Computational Materials **8**, 62 (2022).
59. J.-P. Joost, N. Schlünzen, S. Hese, M. Bonitz, C. Verdozzi, P. Schmitteckert, M. Hopjan, *Löwdin's symmetry dilemma within Green functions theory for the one-dimensional Hubbard model*, Contrib. Plasma Phys, e202000220 (2022).
58. J. Schmidt, L. Pettersson, C. Verdozzi, S. Botti, and M. A. L. Marques, *Crystal graph attention networks for the prediction of stable materials*, Science Advances **7**, 49 (2021).
57. S. Di Sabatino, C. Verdozzi, and P. Romaniello, *Time dependent reduced density matrix functional theory at strong correlation: insights from a two-site Anderson impurity mode*, Phys. Chem. Chem. Phys. **23**, 16730 (2021).
56. L. Wittenbecher, E. Viñas Boström, J. Vogelsang, S. Lehman, K. A. Dick, C. Verdozzi, D. Zigmantas, and A. Mikkelsen, *Unraveling the Ultrafast Hot Electron Dynamics in Semiconductor Nanowires*, ACS Nano **15**, 1133 (2021).
55. E. Viñas Boström, A. D'Andrea, M. Cini, and C. Verdozzi, *Time-resolved multiphoton effects in the fluorescence spectra of two-level systems at rest and in motion*, Phys. Rev. A **102**, 013719 (2020).
54. E. Viñas Boström, P. Helmer, P. Werner, and C. Verdozzi, *Electron-electron versus electron-phonon interactions in lattice models: Screening effects described by a density functional theory approach*, Phys. Rev. Research **1**, 013017 (2019).
53. E. Boström and C. Verdozzi, *Steering Magnetic Skyrmions with Currents: A Nonequilibrium Green's Function Approach*, Physica Status Solidi **b**, 1800590 (2019).
52. M. Hopjan and C. Verdozzi, *Initial correlated states for the Generalized Kadanoff-Baym Ansatz without adiabatic switching-on of interactions in closed systems*, Eur. Phys. J. Special Topics, e2018-800054-3 (2019).
51. T. Rössler, C. Verdozzi, and C.-O. Almbladh, *A v_0 -representability issue in lattice ensemble-DFT and its signature in lattice TDDFT*, Eur. Phys. J. B **91**, 219 (2018).
50. E. Boström, M. Gisselbrecht, T. Brage, C.-O. Almbladh, A. Mikkelsen, and C. Verdozzi, *Time-Stretched Spectroscopy by Quantum Zeno Effect: The Case of the Auger Decay*, Phys. Rev. Lett. **121**, 233201 (2018).
49. S. Ydman, M. Hopjan, and C. Verdozzi, *Controlling Nonequilibrium Kondo-vs-RKKY Scenarios in Nanoclusters*, EPL **123**, 47001 (2018).

48. M. Hopjan, E. Perfetto, G. Stefanucci, and C. Verdozzi, *Molecular Junctions and Molecular Motors: Including Electronic Correlations via Nonequilibrium Green's Functions*, Phys. Rev. B **98**, 041405(R) (2018).
47. D. Karlsson, M. Hopjan, and C. Verdozzi, *Systems with disorder, interactions, and out of equilibrium: The exact independent-particle picture from density functional theory*, Phys. Rev. B **97**, 125151 (2018).
46. E. Boström, A. Mikkelsen, C. Verdozzi, E. Perfetto, and G. Stefanucci, *Charge separation in donor-C60 complexes with real-time Green's functions: The importance of nonlocal correlations*, Nano Lett. **18**, 785 (2018).
45. E. Mårzell, E. Boström, A. Harth, A. Losquin, C. Guo, Y.-C. Cheng, E. Lorek, S. Lehmann, G. Nylund, M. Stankovski, C. L. Arnold, M. Miranda, K. A. Dick, J. Mauritsson, C. Verdozzi, A. L'Huillier, and A. Mikkelsen, *Spatial Control of Multiphoton Electron Excitations in InAs Nanowires by Varying Crystal Phase and Light Polarization*, Nano Lett. **18**, 907 (2018).
44. M. Hopjan, D. Karlsson, S. Ydman, C. Verdozzi, and C.-O. Almbladh, *Merging features from Green's functions and time dependent density functional theory: A route to the description of correlated materials out of equilibrium?*, Phys. Rev. Lett. **116**, 236402 (2016).
43. E. Boström, A. Mikkelsen, and C. Verdozzi, *Time-resolved spectroscopy at surfaces and adsorbate dynamics: insights from a model-system approach*, Phys. Rev. B **93**, 195416 (2016).
42. N. Schlünzen, S. Hermanns, M. Bonitz, C. Verdozzi, *Dynamics of strongly correlated fermions: Ab initio results for two and three dimensions*, Phys. Rev. **93**, 035107 (2016).
41. D. Karlsson and C. Verdozzi, *Transport of Correlated Electrons through Disordered Chains: A Perspective on Entanglement, Conductance, and Disorder Averaging*, Phys. Rev. B **90**, 201109(R), (2014).
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38. V. Vettchinkina, A. Kartsev, D. Karlsson, and C. Verdozzi, *Interacting fermions in 1D disordered lattices: Exploring localization and transport properties with lattice density-functional theories*, Phys. Rev. B, 115115 (2013).
37. D. Karlsson, A. Privitera and C. Verdozzi *Time Dependent Density Functional Theory meets Dynamical Mean Field Theory: Real-Time Dynamics for the 3D Hubbard Model*, Phys. Rev. Lett. **106**, 116401 (2011).
36. M. Puig von Friesen, C. Verdozzi, C.-O. Almbladh, *Can we always get the entanglement entropy from the Kadanoff-Baym equations? The case of the T-matrix approximation*, EPL **95**, 27005 (2011).
35. C. Verdozzi D. Karlsson, M. Puig von Friesen, C.-O. Almbladh, U. von Barth, *Some open questions in TDDFT: Clues from lattice models and Kadanoff-Baym dynamics*, Chemical Physics **391**, 37 (2011).

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33. M. Puig von Friesen, C. Verdozzi, C.-O. Almbladh, *Kadanoff-Baym description of Hubbard clusters out of equilibrium: performance of many-body schemes, correlation-induced damping and multiple quasi-steady states*, Phys. Rev. B 82, 155108 (2010).
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25. C. Verdozzi, N.Kioussis and Y.Luo *Disordered Kondo nanoclusters: Effect of energy spacing* , Phys.Rev.B 70, 132404 (2004).
24. Y.Luo.C. Verdozzi, N.Kioussis, *Zero-temperature phase diagram for strongly correlated nanochains*, J.Appl.Phys. 95, 7198 (2004).
23. C. Verdozzi, P.A.Schultz, R.Wu, A.H.Edwards and N.Kioussis, *Layer intermixing during metal/metal-oxide adsorption: Ti/Sapphire (0001)*, Phys. Rev. B 66, 125408 (2002).
22. E.M.King, S.J.Clark, C. Verdozzi, G.J.Ackland, *Interaction between metallic p orbitals and the p orbitals of organic molecules: the binding between ethylene and aluminum*, Journal of physical Chemistry B 105, 641 (2001).
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16. B.Frederick, J.Cole, J.Power, C.Perry, Q. Chen, N.Richardson, P.Weightman, C. Verdozzi, D.Jennison, P.Schultz, M.Sears, *Molecular orientation with visible light: RAS of 3-thiophene carboxylate on Cu(110) surfaces*, Phys. Rev. B 58, 10883 (1998)
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14. C. Verdozzi, M.Cini, *Extended Hubbard Model with Off-site Interactions: Two particle spectrum and Auger spectroscopy*, Phys.Rev B 51, 7412 (1995).
13. C. Verdozzi, *The role of off-site interactions in the theory of CVV Auger spectra in solids*, J. of El. Spectroscopy and Related Phenomena 72, 141 (1995).
12. M.Cini, A.D'Andrea and C. Verdozzi, *Many-Photon Effects in inelastic light scattering: theory and model applications*, International Journal of Modern Physics B 9 , 1185 (1995).
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8. D. Karlsson and C. Verdozzi *Effective bias and potentials in steady-state quantum transport: A NEGF reverse-engineering study*, J. Phys. Conf. Ser, **696**, 012018 (2016).
7. D. O. Winge, M. Franckie, C. Verdozzi, A. Wacker and M. F. Pereira *Simple electron-electron scattering in non-equilibrium Green's function simulations* J. Phys. Conf. Ser, **696**, 012013 (2016).
6. E. Boström, M. Hopjan, A. Kartsev, C. Verdozzi, and C.-O. Almbladh, *Nonequilibrium Green's functions and atom-surface dynamics: Simple views from a simple model system*, J. Phys. Conf. Ser, **696**, 012007 (2016).
5. M. Puig von Friesen, C. Verdozzi, C.-O. Almbladh, *Artificial damping in the Kadanoff-Baym dynamics of small Hubbard chains*, J. Phys: Conf. Ser. **220**, 012016 (2010).
4. G.J.Ackland and C. Verdozzi, *Speeding up ab initio molecular dynamics by Semi-empirical Potentials* Abstract Book of the MRS Fall Meeting, symposium D, p.65 (1999).
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1. C. Verdozzi, A. Wacker, C.-O.Almbladh and M. Bonitz Editors, *Progress in Non-equilibrium Green's Functions (PNGFVI)*, Journal of Physics: Conference Series **696**, IOP (2016).

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1. N.Kioussis, Y.Luo, C. Verdozzi, in *Physics of Spins in Solids: Materials, Methods, and Applications* , S.Halilov ed, p.115-138, NSS Mathematics, Physics and Chemistry Vol.156 Kluwer (2004).

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C. Verdozzi, *Exact diagonalization studies of strongly correlated clusters*, Lecture notes for the Doctorate Programme in Materials Science, University of Milano-Bicocca, Italy (2005).

Papers that are available on the Los-Alamos preprint archive <http://xxx.lanl.gov/>

2. M. Puig von Friesen, C. Verdozzi, C.-O. Almbladh, *Kadanoff-Baym equations and approximate double occupancy in a Hubbard dimer*, arXiv:1009.2917
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