

Alexander F Kemper

List of Publications by Year in descending order

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98
papers

3,872
citations

126907

33
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128289

60
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101
all docs

101
docs citations

101
times ranked

4207
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Quantum Markov chain Monte Carlo with digital dissipative dynamics on quantum computers. Quantum Science and Technology, 2022, 7, 025017. | 5.8 | 2 |
| 2 | Algebraic compression of quantum circuits for Hamiltonian evolution. Physical Review A, 2022, 105, . | 2.5 | 21 |
| 3 | Determining Ground-State Phase Diagrams on Quantum Computers via a Generalized Application of Adiabatic State Preparation. Symmetry, 2022, 14, 809. | 2.2 | 2 |
| 4 | Enhanced charge density wave coherence in a light-quenched, high-temperature superconductor. Science, 2022, 376, 860-864. | 12.6 | 22 |
| 5 | An Algebraic Quantum Circuit Compression Algorithm for Hamiltonian Simulation. SIAM Journal on Matrix Analysis and Applications, 2022, 43, 1084-1108. | 1.4 | 9 |
| 6 | Evolution of nonthermal electrons in pump-probe electron relaxation dynamics. , 2021, , . | | 0 |
| 7 | Fermi liquid theory sheds light on hot electron-hole liquid in Sr_2RuO_4 . Physical Review B, 2021, 103, . | 3.2 | 9 |
| 8 | Flat-band-induced itinerant ferromagnetism in $RbCo_2S_2$. Physical Review B, 2021, 103, . | 3.2 | 8 |
| 9 | Probing the interplay between lattice dynamics and short-range magnetic correlations in CuGeO ₃ with femtosecond RIXS. Npj Quantum Materials, 2021, 6, . | 5.2 | 6 |
| 10 | Timescales of excited state relaxation in $RuCl_2$ observed by time-resolved two-photon photoemission spectroscopy. Physical Review B, 2021, 103, . | 1.2 | 7 |
| 11 | Automated tracking of <i>S. pombe</i> spindle elongation dynamics. Journal of Microscopy, 2021, 284, 83-94. | 1.8 | 4 |
| 12 | What do the two times in two-time correlation functions mean for interpreting tr-ARPES?. Journal of Electron Spectroscopy and Related Phenomena, 2021, 251, 147104. | 1.7 | 6 |
| 13 | Many-body thermodynamics on quantum computers via partition function zeros. Science Advances, 2021, 7, . | 10.3 | 22 |
| 14 | Coherent control of asymmetric spintronic terahertz emission from two-dimensional hybrid metal halides. Nature Communications, 2021, 12, 5744. | 12.8 | 24 |
| 15 | Simulating quantum materials with digital quantum computers. Quantum Science and Technology, 2021, 6, 043002. | 5.8 | 32 |
| 16 | Nonequilibrium dynamics of spontaneous symmetry breaking into a hidden state of charge-density wave. Nature Communications, 2021, 12, 566. | 12.8 | 29 |
| 17 | Quantum Fluctuations of Charge Order Induce Phonon Softening in a Superconducting Cuprate. Physical Review X, 2021, 11, . | 8.9 | 9 |
| 18 | Relaxation timescales and electron-phonon coupling in optically pumped $YBaCu_2O_{7-x}$ revealed by time-resolved Raman scattering. Physical Review B, 2021, 104, . | | |

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|----|--|------|-----------|
| 19 | Driven-dissipative quantum mechanics on a lattice: Simulating a fermionic reservoir on a quantum computer. <i>Physical Review B</i> , 2020, 102, . | 3.2 | 37 |
| 20 | Establishing nonthermal regimes in pump-probe electron relaxation dynamics. <i>Physical Review B</i> , 2020, 102, . | 3.2 | 14 |
| 21 | Visualizing Tailored Spin Phenomena in a Reduced-Dimensional Topological Superlattice. <i>Advanced Materials</i> , 2020, 32, e2005315. | 21.0 | 11 |
| 22 | Quantum computation of magnon spectra. <i>Physical Review B</i> , 2020, 101, . | 3.2 | 35 |
| 23 | Determination of mode-projected electron-phonon coupling from time-domain observations of microscopic scattering processes. , 2020, , . | | 0 |
| 24 | Theory of Time-Resolved Optical Conductivity of Superconductors: Comparing Two Methods for Its Evaluation. <i>Condensed Matter</i> , 2019, 4, 79. | 1.8 | 1 |
| 25 | Band-Resolved Imaging of Photocurrent in a Topological Insulator. <i>Physical Review Letters</i> , 2019, 122, 167401. | 7.8 | 55 |
| 26 | Coherent excitonic quantum beats in time-resolved photoemission measurements. <i>Physical Review B</i> , 2019, 99, . | 3.2 | 16 |
| 27 | Observation of chiral surface excitons in a topological insulator Bi ₂ Se ₃ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 4006-4011. | 7.1 | 29 |
| 28 | Higgs oscillations in time-resolved optical conductivity. <i>Physical Review B</i> , 2019, 100, . | 3.2 | 7 |
| 29 | Direct determination of mode-projected electron-phonon coupling in the time domain. <i>Science</i> , 2019, 366, 1231-1236. | 12.6 | 73 |
| 30 | Dense Electron-Hole Plasma Formation and Ultralong Charge Lifetime in Monolayer MoS ₂ via Material Tuning. <i>Nano Letters</i> , 2019, 19, 1104-1111. | 9.1 | 41 |
| 31 | Detailed band structure of twinned and detwinned BaFe_2As_2 studied with angle-resolved photoemission spectroscopy. <i>Physical Review B</i> , 2019, 99, . | 10.2 | 28 |
| 32 | Nonequilibrium electron and lattice dynamics of strongly correlated Bi ₂ Sr ₂ CaCu ₂ O ₈ + Γ single crystals. <i>Science Advances</i> , 2018, 4, eaap7427. | 10.3 | 58 |
| 33 | Dynamics of correlation-frozen antinodal quasiparticles in superconducting cuprates. <i>Science Advances</i> , 2018, 4, eaar1998. | 10.3 | 23 |
| 34 | Theoretical Phase Diagram for the Room-Temperature Electron-Hole Liquid in Photoexcited Quasi-Two-Dimensional Monolayer MoS ₂ . <i>Nano Letters</i> , 2018, 18, 455-459. | 9.1 | 32 |
| 35 | Identifying a forward-scattering superconductor through pump-probe spectroscopy. <i>Europhysics Letters</i> , 2018, 124, 67002. | 2.0 | 2 |
| 36 | All-optical nonequilibrium pathway to stabilising magnetic Weyl semimetals in pyrochlore iridates. <i>Nature Communications</i> , 2018, 9, 4452. | 12.8 | 38 |

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|----|---|------|-----------|
| 37 | Interfacial structure of SrZrTi _{1-x} O ₃ films on Ge. Applied Physics Letters, 2018, 113, 201601. | 3.3 | 5 |
| 38 | Nonequilibrium electron dynamics in pump-probe spectroscopy: Role of excited phonon populations. Physical Review B, 2018, 98, . | 3.2 | 12 |
| 39 | General Principles for the Nonequilibrium Relaxation of Populations in Quantum Materials. Physical Review X, 2018, 8, . | 8.9 | 21 |
| 40 | Spectral Evidence for Emergent Order in $\text{Ba}_{1-x}\text{Bi}_x\text{Fe}_2\text{As}_2$. Physical Review Letters, 2018, 121, 127001. | 7.8 | 11 |
| 41 | Photoemission signature of excitons. Physical Review B, 2018, 97, . | 3.2 | 50 |
| 42 | Ultrafast multi-terahertz probes of symmetry breaking in a stripe-phase correlated oxide. , 2018, , . | | 0 |
| 43 | Creating stable Floquet-Weyl semimetals by laser-driving of 3D Dirac materials. Nature Communications, 2017, 8, 13940. | 12.8 | 255 |
| 44 | Relaxation of nonequilibrium populations after a pump: the breaking of Mathiessen's rule. Proceedings of SPIE, 2017, , . | 0.8 | 0 |
| 45 | Surface vibrational modes of the topological insulator Bi_2Te_3 observed by Raman spectroscopy. Physical Review B, 2017, 95, . | | |
| 46 | The role of average time dependence on the relaxation of excited electron populations in nonequilibrium many-body physics. Fortschritte Der Physik, 2017, 65, 1600042. | 4.4 | 4 |
| 47 | Ultrafast dynamics of vibrational symmetry breaking in a charge-ordered nickelate. Science Advances, 2017, 3, e1600735. | 10.3 | 18 |
| 48 | Amplitude mode oscillations in pump-probe photoemission spectra from a d-wave superconductor. Physical Review B, 2017, 96, . | 3.2 | 18 |
| 49 | Review of the Theoretical Description of Time-Resolved Angle-Resolved Photoemission Spectroscopy in Electron-Phonon Mediated Superconductors. Annalen Der Physik, 2017, 529, 1600235. | 2.4 | 41 |
| 50 | Relationship between Population Dynamics and the Self-Energy in Driven Non-Equilibrium Systems. Entropy, 2016, 18, 180. | 2.2 | 10 |
| 51 | Energy dissipation from a correlated system driven out of equilibrium. Nature Communications, 2016, 7, 13761. | 12.8 | 63 |
| 52 | The rate of quasiparticle recombination probes the onset of coherence in cuprate superconductors. Scientific Reports, 2016, 6, 23610. | 3.3 | 27 |
| 53 | Ultrafast resonant soft x-ray diffraction dynamics of the charge density wave in TbTe ₃ . Physical Review B, 2016, 93, . | 3.2 | 27 |
| 54 | Theory of light-enhanced phonon-mediated superconductivity. Physical Review B, 2016, 93, . | 3.2 | 119 |

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|----|--|------|-----------|
| 55 | Spin-polarized surface resonances accompanying topological surface state formation. Nature Communications, 2016, 7, 13143. | 12.8 | 71 |
| 56 | First-principles study of the phonon modes in bismuth sillenites. Physical Review B, 2015, 91, . | 3.2 | 5 |
| 57 | Classification of collective modes in a charge density wave by momentum-dependent modulation of the electronic band structure. Physical Review B, 2015, 91, . | 3.2 | 19 |
| 58 | Scattering bottleneck for spin dynamics in metallic helical antiferromagnetic dysprosium. Physical Review B, 2015, 92, . | 3.2 | 6 |
| 59 | Direct observation of Higgs mode oscillations in the pump-probe photoemission spectra of electron-phonon mediated superconductors. Physical Review B, 2015, 92, . | 3.2 | 78 |
| 60 | Bandwidth and Electron Correlation-Tuned Superconductivity in $\text{Rb}_{0.8}\text{Fe}_2(\text{Se}_{1-x}\text{S}_x)_2$. Physical Review Letters, 2015, 115, 256403. | 7.8 | 16 |
| 61 | Numerical integration for ab initio many-electron self energy calculations within the GW approximation. Journal of Computational Physics, 2015, 286, 1-13. | 3.8 | 15 |
| 62 | Thickness-Dependent Coherent Phonon Frequency in Ultrathin $\text{FeSe}/\text{SrTiO}_3$ Films. Nano Letters, 2015, 15, 4150-4154. | 9.1 | 21 |
| 63 | Theory of Floquet band formation and local pseudospin textures in pump-probe photoemission of graphene. Nature Communications, 2015, 6, 7047. | 12.8 | 203 |
| 64 | Direct characterization of photoinduced lattice dynamics in BaFe_2As_2 . Nature Communications, 2015, 6, 7377. | 12.8 | 32 |
| 65 | Transient Exchange Interaction in a Helical Antiferromagnet. , 2015, , . | | 0 |
| 66 | Distinguishing Bulk and Surface Electron-Phonon Coupling in the Topological Insulator Bi_2Te_3 . Time-Resolved Photoemission Spectroscopy. Physical Review Letters, 2014, 113, 157401. | 7.8 | 103 |
| 67 | Publisher's Note: Effect of dynamical spectral weight redistribution on effective interactions in time-resolved spectroscopy [Phys. Rev. B 90 , 075126 (2014)]. Physical Review B, 2014, 90, . | 3.2 | 0 |
| 68 | Effect of dynamical spectral weight redistribution on effective interactions in time-resolved spectroscopy. Physical Review B, 2014, 90, . | 3.2 | 45 |
| 69 | Dynamic competition between spin-density wave order and superconductivity in underdoped $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$. Nature Communications, 2014, 5, 3711. | 12.8 | 38 |
| 70 | Manipulation of Gap Nodes by Uniaxial Strain in Iron-Based Superconductors. Physical Review Letters, 2014, 113, 217001. | 7.8 | 31 |
| 71 | Bandgap closure and reopening in CsAu_3Bi at high pressure. Physical Review B. 2014, 89, . | 3.2 | 14 |
| 72 | Exact solution for high harmonic generation and the response to an ac driving field for a charge density wave insulator. Physical Review B, 2014, 90, . | 3.2 | 2 |

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| 73 | Ultrafast electron dynamics in the topological insulator Bi ₂ Se ₃ studied by time-resolved photoemission spectroscopy. Journal of Electron Spectroscopy and Related Phenomena, 2014, 195, 249-257. | 1.7 | 66 |
| 74 | Balancing Act: Evidence for a Strong Subdominant d -Wave Pairing Channel in $Ba_{0.6}K_{0.4}Fe_2As_2$. Physical Review Letters, 2013, 111, 136802. | 8.9 | 40 |
| 75 | Hot electron transport in a strongly correlated transition-metal oxide. Scientific Reports, 2013, 3, 1274. | 3.3 | 16 |
| 76 | Theoretical description of high-order harmonic generation in solids. New Journal of Physics, 2013, 15, 023003. | 2.9 | 73 |
| 77 | Direct Optical Coupling to an Unoccupied Dirac Surface State in the Topological Insulator Bi_2Se_3 . Physical Review Letters, 2013, 111, 136802. | 7.8 | 142 |
| 78 | Examining Electron-Boson Coupling Using Time-Resolved Spectroscopy. Physical Review X, 2013, 3, . | 8.9 | 82 |
| 79 | Electron-Mediated Relaxation Following Ultrafast Pumping of Strongly Correlated Materials: Model Evidence of a Correlation-Tuned Crossover between Thermal and Nonthermal States. Physical Review Letters, 2013, 111, 077401. | 7.8 | 27 |
| 80 | Mapping of unoccupied states and relevant bosonic modes via the time-dependent momentum distribution. Physical Review B, 2013, 87, . | 3.2 | 36 |
| 81 | Time-dependent charge-order and spin-order recovery in striped systems. Physical Review B, 2013, 88, . | 3.2 | 12 |
| 82 | Tunneling spectroscopy for probing orbital anisotropy in iron pnictides. Physical Review B, 2013, 88, . Infrared study of the electronic structure of the metallic pyrochlore iridate $Bi_2O_2Ir_2O_7$ | 3.2 | 13 |
| 83 | Alternative route to charge density wave formation in multiband systems. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 64-69. | 3.2 | 24 |
| 84 | Structure and functionality of bromine doped graphite. Journal of Chemical Physics, 2013, 138, 164702. | 7.1 | 86 |
| 85 | Pulsed high harmonic generation of light due to pumped Bloch oscillations in noninteracting metals. Physica Scripta, 2012, T151, 014062. | 3.0 | 8 |
| 86 | Density functional study of gold and iron clusters on perfect and defected graphene. Physical Review B, 2012, 85, . | 2.5 | 5 |
| 87 | Phase fluctuations and the absence of topological defects in a photo-excited charge-ordered nickelate. Nature Communications, 2012, 3, 838. | 3.2 | 53 |
| 88 | Anisotropic quasiparticle lifetimes in Fe-based superconductors. Physical Review B, 2011, 83, . | 12.8 | 85 |
| 89 | Theory of Two-Magnon Raman Scattering in Iron Pnictides and Chalcogenides. Physical Review Letters, 2011, 106, 067002. | 3.2 | 37 |
| 90 | | 7.8 | 29 |

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|----|--|-----|-----------|
| 91 | Symmetry-breaking orbital anisotropy observed for detwinned Ba(Fe _{1-x} Co _x) ₂ Tj ETQq1 1 0.784314 rgBT / Ov the National Academy of Sciences of the United States of America, 2011, 108, 6878-6883. | 7.1 | 464 |
| 92 | Spin fluctuations and superconductivity in a three-dimensional tight-binding model for $BaFe_{2-x}Co_x$ Physical Review B, 2010, 81, . | 3.2 | 190 |
| 93 | Sensitivity of the superconducting state and magnetic susceptibility to key aspects of electronic structure in ferropnictides. New Journal of Physics, 2010, 12, 073030. | 2.9 | 134 |
| 94 | Curvature effect on the interaction between folded graphitic surface and silver clusters. Physical Review B, 2009, 79, . | 3.2 | 7 |
| 95 | Insensitivity of d-wave pairing to disorder in the high-temperature cuprate superconductors. Physical Review B, 2009, 79, . | 3.2 | 18 |
| 96 | Effects of cobalt doping and three-dimensionality in $BaFe_{2-x}Co_x$ Physical Review B, 2009, 80, . | 3.2 | 54 |
| 97 | Nonequilibrium Green's function study of $Pd_{4-x}Co_x$ carbon nanotubes as hydrogen sensors. Physical Review B, 2009, 79, . | 3.2 | 19 |
| 98 | Determining quantum phase diagrams of topological Kitaev-inspired models on NISQ quantum hardware. Quantum - the Open Journal for Quantum Science, 0, 5, 553. | 0.0 | 12 |