Profile Page

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Research Interests :

Theoretical Condensed Matter Physics
(Quantum Liquids, Quantum Monte Carlo, Electronic Structure and Strongly Correlated Systems, and Nanomagnetism & Magnonics)

Other Profile Links :

Google Scholar Link :

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Computational Quantum Many Body Physics Lab Click Here

Journal Publications :

Year	Journal	Publication
2023	Phys. Rev. B	A. Girdhar, Vinod Ashokan, R. O. Sharma, N. D. Drummond and K. N. Pathak, Wire width and density dependence of crossover in the peak of static structure factor from 2kF ? 4kF
2022	Phys. Rev. B 105 , 115140	A. Girdhar, Vinod Ashokan, N. D. Drummond, Klaus Morawetz and K. N. Pathak, Electron correlation and confinement effects in quasi-one-dimensional quantum wires at high-density
2021	Phys. Rev. B 104 , 035149	R. O. Sharma, N. D. Drummond, Vinod Ashokan, K. N. Pathak, and Klaus Morawetz Ground-state properties of electron-electron biwire systems
2020	Phys Rev. B 101, 075130	Vinod Ashokan, Renu Bala, Klaus Morawetz , and K. N. Pathak , Exact ground-state properties of the one-dimensional electron gas at high density,
2018	Materialia 4, 373-387	E. A. Moujaes, , A. Khater, M. A. Ghantous Vinod Ashokan Magnonic ballistic transport across Fe-Ni alloy nanojunctions between Fe/Co leads using Phase Field Matching and Ising Effective Field Theory approaches

2018	Phys. Rev. B 98, 125139	Vinod Ashokan, N.D. Drummond and K.N. Pathak, One-dimensional electron fluid at high density,
2018	Phy. Rev. B 97, 155147	Klaus Morawetz , Vinod Ashokan, Renu Bala, and K. N. Pathak, Conditions where random phase approximation becomes exact in the high-density limit
2018	Eur. Phys. J. B 91: 29	Vinod Ashokan , Renu Bala , Klaus Morawetz, and Kare Narain Pathak, Dependence of structure factor and correlation energy on the width of electron wires,
2016	Thin Solid Films 616, 6-16	Vinod Ashokan?, M.A. Ghantous, D. Ghader and A. Khater Computation of magnons ballistic transport across an ordered magnetic ironcobalt alloy nanojunction between iron leads
2016	Mod. Phys. Lett. B, 30, 1650360	Vinod Ashokan?, B.D. Indu and A.kr. Dimri Role of defects, resonances, anharmonicities, and electron-phonon scattering processes on thermal conductivity of Y Ba2Cu3O7??
2015	J. Magnetism and Magnetic Material, 384 18-26	Vinod Ashokan?, A. Khater, M.A. Ghantous and D. Ghader Spin wave ballistic transport properties of [Co1?cGdc]?[Co]?[Co1?cGdc]? nanojunctions between Co leads
2015	J. Superlattices and Microstructures, 82, 574-583	R. Saini, Vinod Ashokan? and B.D. Indu Phonon conduction in Superlattices
2015	J. Magnetism and Magnetic Material, 396, 16-25	Vinod Ashokan?, M.A. Ghantous and A. Khater Modeling the sublattice magnetizations for the layered bcc nanojunction ...F e[Fe1?cCoc]?Fe... systems
2015	Mod. Phys Lett. B, 29 1550177	Vinod Ashokan?, B.D. Indu Anharmonic phonon-electron effects on phonon density of states in La2?xSrxCuO4
2014	J. Magnetism and Magnetic Material, 363, 66-76	Vinod Ashokan?, M.A. Ghantous, D. Ghader and A. Khater Ballistic transport of spin waves incident from cobalt leads across cobalt-gadolinium alloy nanojunctions
2013	Eur. Phy. J. B 86, 180	D. Ghader, Vinod Ashokan , M.A. Ghantous MA, and A. Khater Spin waves transport across a ferrimagnetically ordered nanojunction of cobaltgadolinium alloy between cobalt leads
2013	Ind. J. Appl. Res. 3, 406-409	H. Singh, A. Singh, Vinod Ashokan and B.D. Indu Signature of anharmonicities in high temperature superconductors
2013	Res. J. Physical Sci. 1, 28-31	R. Saini, Vinod Ashokan and B.D. Indu Transport phenomena in semiconductor quantum wells
2013	Mod. Phys. Lett. B, 27, 1350240	Vinod Ashokan, B.D. Indu Effects of defects and anharmonicity on dx2?y2 wave pairing symmetry in cuprates
2013	AIP Advances, 3, 022108 (1-19)	Vinod Ashokan?, B.D.Indu Renormalization effects and phonon density of states in high temperature superconductors
2013	J. of Materials, 605929 (1-4)	A. Singh A, H, Singh, Vinod Ashokan and B.D. Indu Electrons and phonons in high temperature superconductors
2013	J. Appl. Phys. 113, 094303 (1-8)	M.A. Ghantous, A. Khater, Vinod Ashokan and D. Ghader Sublattice magnetizations of ultrathin alloy [Co1?cGdc]n nanojunctions between Co leads using the combined EFT and MFT methods
2013	Int. J. of Adv. in Sci. & Tech. 6, 22-25	R. Saini, Vinod Ashokan and B.D. Indu The electron-phonon problem in quantum wells
2012	Pramana, 78, 459-468	Richa Saini, Vinod Ashokan and B.D. Indu Phonon heat transport in Gallium Arsenide
2012	Acta Physica Polonica A 121 639-649	M. Ataullah Ansari, Vinod Ashokan, B.D. Indu , R. Kumar Lattice thermal conductivity of GaAs
2012	Adv. Mat. Phy. & Chem 2 249-254	H. Singh, A. Singh, Vinod Ashokan and B.D. Indu Theory of electron density of states of high temperature impurity induced anharmonic superconductors

2011	Mod. Phys. Lett. B., 25 663-678	Vinod Ashokan and B.D. Indu Theory of thermal conductivity of high temperature superconductors: A new approach
2011	AIP Advances 1 032101 (1-16)	Vinod Ashokan?, B.D. Indu and A. Kr. Dimri, Signature of electron-phonon interaction in high temperature superconductors
2011	Int. J. of Mod. Phys. B, 25, 1409-1418	M. Ataullah Ansari, Vinod Ashokan, B.D. Indu Phonon heat conductivity of InSb and CdS
2010	Thin Solid Films, 515 e28-e30	Vinod Ashokan and B.D. Indu, Thermal conductivity of Bi-Sr-Ca-Cu-O superconductors