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Nota di contenuto	Alternative strategies for thermoelectric materials developments / A.P. Goncalves, C. Godari -- Thermopower in correlated systems / N. Sriram Shastry -- Thermoelectric properties of correlated electron systems LnPtGe and LnPtGe (Ln = Ce, Pr) and non-centrosymmetric XTP-- (X=Yb, Hf and T = Fe, Co) / B.D. White [and others] -- Thermopower of the correlated narrow gap semiconductor FeSi and comparison to RuSi / Jan M. Tomczak, K. Haule, G. Kotliar -- Highly efficient segmented p-type thermoelectric leg / Yatir Sadia, Ohad Ben-Yehuda, Yaniv Gelbstein -- Charge kondo effect in thermoelectric properties and hardness after HPT processing of micro- and nanostructured skutterudites / G. Rogl [and others] -- Thermal transport of a delta-doped multilayer with strongly correlated electrons / Veljko Zlatic, James K. Frericks -- From superconductivity towards thermoelectricity: ge-based skutterudites / S. Humer [and others] -- Nonlinear thermoelectric response of quantum dots: renormalized dual fermions out of equilibrium / Stefan Kirchner, Farzaneh Zamani,

Enrique Munoz -- Nernst effect of iron pnictide and cuprate superconductors: signatures of spin density wave and stripe order / Christian Hess -- Monte-carlo approach to stationary non-equilibrium of mesoscopic systems / Andrea Dirks, Thomas Pruschke, Jong E. Han -- Influence of dirac fermions on magnetothermoelectric transport in iron-based superconductors / M. Matusiak [and others] -- Inducing current in one dimensional systems of interacting fermions / Marcin Mierzejewski, Janez Bonca, Peter Prelovsek -- Spin-orbital entangled states in transition metal oxides / Andrzej M. Oles -- The out-of-equilibrium time-dependent gutzwiller approximation / Michele Fabrizio.

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Sommario/riassunto

Thermoelectric devices could play an important role in making efficient use of our energy resources but their efficiency would need to be increased for their wide scale application. There is a multidisciplinary search for materials with an enhanced thermoelectric responses for use in such devices. This volume covers the latest ideas and developments in this research field, covering topics ranging from the fabrication and characterization of new materials, particularly those with strong electron correlation, use of nanostructured, layered materials and composites, through to theoretical work to gain a deeper understanding of thermoelectric behavior. It should be a useful guide and stimulus to all working in this very topical field.

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