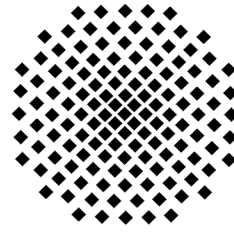


Stuttgarter Physikalisches Kolloquium

Fachbereich Physik, Universität Stuttgart
Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme*

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17:15 Uhr

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Universität Stuttgart, Pfaffenwaldring 57, 70569 Stuttgart-Vaihingen

Gastgeber: Prof. Günter Wunner, Universität Stuttgart, Telefon: 0711 - 685-64989

Can we control the heat current? A major societal problem for the 21st century

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Abstract

The understanding of the microscopic mechanisms which determine the macroscopic laws of heat transport is one of the main problems of statistical mechanics. On the other hand, providing a sustainable supply of energy to the world's population will become a major societal problem for the 21st century as fossil fuel supplies decrease and world demand and environmental concern increases. Thermoelectric phenomena, which involve the conversion between thermal and electrical energy, and provide a method for heating and cooling materials, are expected to play an increasingly important role in meeting the energy challenge of the future.