Special Issue

Recent Advances in the Theory of Disordered Systems

Message from the Guest Editors

Since the pioneering proposal made by Philip Anderson about sixty-five years ago stated that diffusion vanishes in random lattices, Anderson localization has attracted extensive and ongoing interesting, where the disorder induced by, e.g., impurities gives rise to the localization of electronic wave functions. This disorder-induced Anderson localization has been reported experimentally in many disordered media, ranging from light, microwaves, ultrasound, to cold atoms. Indeed, the disorder is inevitable during the fabrication of materials and usually leads to the localization of wave functions. Until now, many intriguing phenomena have reported in disordered systems or quasiperiodic ones. This Special Issue is dedicated to reviewing recent developments, sharing new results, as well as opening new perspectives to the theory of disordered systems. The Special Issue of interest include, but are not limited to:

- anderson localization
- localization transition
- disordered systems
- mobility edge
- quantum transport
- quasiperiodic systems
- 2D materials
- 1D systems
- localization length
- participation ratio

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