



School of Nano Science



IPM Condensed Matter &
Statistical Physics Group

Weekly Seminar

Metal halide perovskites

Invited speaker: *Dr. Negar Astani*

Postdoctoral fellow, Department of Physics, Sharif University of Technology

Abstract:

ABX₃- type organic lead halide perovskites currently attract broad attention as light harvesters for solar cells due to their high power conversion efficiency (PCE). 3D, ABX₃ structure consists of organic molecules encased in an inorganic solid frame. Their 2D counterpart has alternate insulating organic layers in between. The mixed soft-condensed matter nature of these materials triggers complex chemical and physical phenomena which calls for the use of ab initio electronic structure methods for better description. In this talk we discuss the electronic structure of halide perovskites with the emphasis on the application of different electronic structure methods in particular density functional theory for smarter and more efficient design of perovskite-based solar cells.

Wednesday, 12 Dey 1397 (Jan 2, 2019), 14:00-15:00

Seminar Room (classroom A), Farmanieh Building, IPM