

Energy Colloquium

Electron-Molecule Collisions: Theory, Experiments, and Applications

Prof. Viatcheslav Kokoouline

University of Central Florida

23 May 2017, 16:00

Skolkovo Innovation Center

Technopark, Building 3, Room 402



ABSTRACT:

In this talk, I will discuss different areas where electron-molecule collisions play an important role. In principle, in any plasma environment, where molecules or molecular ions are not completely destroyed in collisions, say, at temperatures below 50000 K, the electron-molecule collisions play an important role in chemical evolution of the plasma and determine various plasma properties. The areas of a particular interest of current experimental and theoretical studies are plasmas of the interstellar medium and planetary atmospheres, elementary processes in radiotherapy, plasma etching in semiconductor industry, plasma-wall interaction in tokamak reactors, combustion plasma, chemical lasers. I will also discuss main problems related to the understanding of how electrons interact with molecules in different plasma environment. A brief review of different experimental and theoretical studies in the area will be presented.

Non-Skoltech attendees should request access to the building in advance by sending their passport details to energy.colloquium@skoltech.ru

Colloquium schedule and information on how to get to the colloquium can be found at <http://www.skoltech.ru/en/energy-colloquium/>