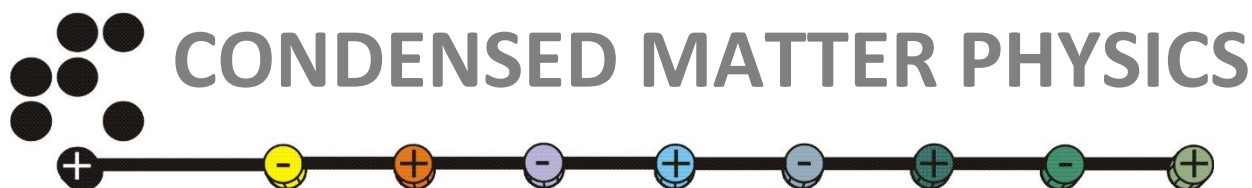


F-5 SEMINAR



*Friday, June 17, 2022
at 10:30 AM*

*in the seminar room of physics (room 106)
Condensed Matter Physics, Jožef Stefan Institute*

Rok Podlipec, PhD
Jožef Stefan Institute, Ljubljana

New correlative microscopy approaches for toxicology studies of nanomaterials

A comprehensive understanding of the mechanisms leading to chronic inflammation of tissues after the exposure to different types of nanomaterials is greatly lacking. In the case of lung tissue, repeating events of exposure to metal-oxide or carbon nanomaterials can eventually lead to persistent inflammation and further cardiovascular diseases. To better understand these adverse outcomes, one needs to dig into the initial events that are formed between molecules on nanoscale, thus requiring an advanced combination of microscopy and spectroscopy techniques.

Through our last studies focused on lung and periprosthetic tissue inflammation, we show the new workflow of the so-called correlative microscopy (CM) with which we have gained new structural and functional insights into the investigated systems. By measuring subcellular and molecular events, this approach provides new important knowledge to better understand causal relations in the field of nanotoxicology.

You are cordially invited to attend.