



Vabilo na Preglov kolokvij / Invitation to the Pregl colloquium

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**Četrtek / Thursday 22. 9. 2022, ob / at 13:00**

Velika predavalnica Kemijskega inštituta /

Great Lecture Hall

National Institute of Chemistry

Hajdrihova 19, Ljubljana, Slovenia

## **Earth-Abundant Materials for Nanoplasmonics**

The optical properties of Au and Ag nanoparticles feature in Roman glassware as well as medieval stained glass. An understanding of the phenomenon giving rise to their brilliant colors emerged more recently: light-driven collective oscillations of conduction electrons called localized surface plasmon resonances (LSPRs) lead to wavelength-dependent absorption and scattering. LSPRs are far from just pretty: they have a broad technology potential as an attractive platform for surface-enhanced spectroscopies, photothermal cancer therapy, waveguides, and so on. Most plasmonic nanoparticles studied to date are of either Cu, Ag, and Au. The former two can pose significant challenges related to oxidation, the latter is often perceived as cost-prohibitive, and all three are rare. We have focused our attention on overcoming these obstacles using Mg. This talk will discuss our results on Mg nanoparticle plasmonics, spanning colloidal synthetic approaches, oxidation control, decoration pathways, optical and electron spectroscopy studies, and more.

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Vljudno vabljeni / Kindly invited