FKKT | UNIVERZA V LJUBLJANI
Fakulteta za kemijo in kemijsko tehnologijo

VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI / INVITATION TO THE
LECTURE WITHIN DOCTORAL PROGRAMME IN
CHEMICAL SCIENCES

Prof. dr hab. Dariusz Matoga

Faculty of Chemistry, Jagiellonian University
Kraków, Poland

z naslovom / title:

From Design to Function: Insights from the JUK Series of MOFs

v sredo, 25. 11. 2026 ob 15. uri
v predavalnici 1 v 1. nadstropju Fakultete za kemijo in kemijsko tehnologijo, Večna pot 113 ***/***
on Wednesday, 25. 11. 2026 at 15.00
in lecture room 1, 1st floor at the Faculty of Chemistry and Chemical Technology, Večna pot 113

Vljudno vabljeni! / Kindly invited!

Večna pot 113,
1000 Ljubljana, Slovenija
T: +386 1 479 84 00
dekanat@fkkt.uni-lj.si
www.fkkt.uni-lj.si

Abstract:

Metal-organic frameworks (MOFs) constitute a versatile class of crystalline materials whose properties can be tailored through crystal engineering and post-synthetic modification. This lecture will present selected examples from the JUK family of MOFs developed at the Jagiellonian University in Kraków, illustrating how these concepts can be translated into advanced material properties. The examples discussed encompass responsive frameworks based on the JUK-8 platform, highlighting tunable structural transformations, humidity sensing, and molecular logic gate behaviour; reactive MOFs enabling post-synthetic diversification through inverse electron-demand Diels-Alder (iEDDA) chemistry; and proton-conducting framework materials developed through both de novo and post-synthetic approaches. Together, these studies demonstrate how crystal engineering and chemical modification can be translated into responsiveness, reactivity, and functionality in crystalline materials.