

Univerza
v Ljubljani

Fakulteta *za kemijo*
in kemijsko tehnologijo

p.p. 537, Večna pot 113
1001 Ljubljana
telefon: 01 479 80 00
faks: 01 241 91 44
dekanat@fkkk.uni-lj.si



*VABILO NA PREDAVANJE
V OKVIRU DOKTORSKEGA ŠTUDIJA
KEMIJSKE ZNANOSTI*

Prof. Anne E. V. Gorden

*Department of Chemistry and Biochemistry,
Auburn University, USA*

z naslovom:

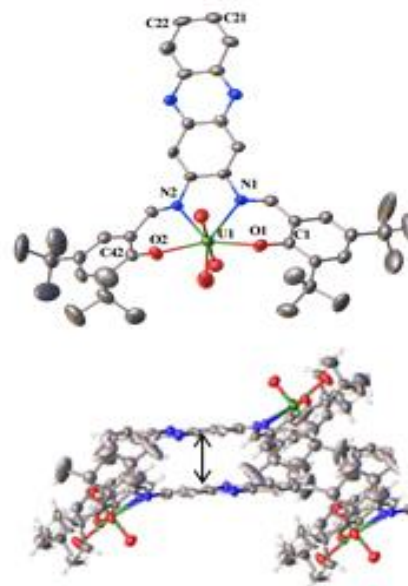
**Taking advantage of the chemistry of
heterocycles in actinide selective
coordination**

v četrtek, 24. maja 2018 ob 15:00 uri
v predavalnici 1 v 1. nadstropju Fakultete
za kemijo in kemijsko tehnologijo, Večna pot 113

Vljudno vabljeni!

Povzetek:

Increasing the use of nuclear power is one idea to address the demands of our highly energy driven society while still reducing global dependence on fossil fuels.¹ The potential for detrimental environmental effects from contamination due to a spill or radiological event limits public acceptance of the use of 5f elements, the actinides, as nuclear fuels. Because of this, we have been interested in the unique properties of the actinides, their coordination behavior, and distinctions that can be made between the 5f actinides and the 4f lanthanides or transition metals. Current methods of characterization of trace materials require purification of samples prior to measurement. New materials are required that can coordinate, sense, and isolate actinides. Such research addresses probative questions about the nature of actinide bonding, the validity of models for the actinides, hard-soft interactions, and interactions between metals in bimetallic complexes. Here, we report imine azadonors incorporated into an ethylene backbone for coordination of uranium as uranyl (U(VI) UO_2^{2+}), thorium (Th(IV)), and lanthanides to further decrease detection limits and reduce signal to noise in rapid detection methods, and we characterize these systems, their unique packing, and pi-pi interactions.



Projections with the long range ordering caused by pi-pi stacking of the ligand shown. U shown in green, carbon grey, hydrogen in white, oxygen red, and nitrogen blue. Coordinating and interstitial solvents have been removed for clarity

REFERENCES

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4. a.) Hardy, E. E; Wyss, K.M.; Keller, R.J.; Gorden, John D.; Gorden, Anne E.V. *Dalton Trans.* **2018**, 1337. b.) Hardy, E. E.; Wyss, K.M.; Gorden, John D.; Ariyaratna, Isuru R.; Miliordos, Evangelos; Gorden, Anne E.V. *Chem. Commun.* **2017**, 53.