

47 JdA Programme

SUNDAY, 26th March 2017

Arrival by shuttle bus

17:00 – 19:00 **Registration**

19:00 – 22:00 **Welcome party**

MONDAY, 27th March 2017

8:40 – 9:00 **Welcome address**

9:00 – 10:15 **Session I**

Chairperson: D. Kaczorowski

- 9:00 – 9:25 R. Troć
 “A rattling effect in actinide cage-type structures”
- 9:25 – 9:50 A.V. Andreev, Y. Skourski, D.I. Gorbunov
 “Magnetostriction at metamagnetic transition in UCo_2Si_2 ”
- 9:50 – 10:15 L. Martel, A. Hen, Y. Tokunaga, J.-C. Griveau, E. Colineau,
 N. Magnani, J. Somers, R. Caciuffo
 “Investigation of the $\text{U}_{0.15}\text{Np}_{0.85}\text{O}_2$ mixed oxide”

10:15 – 10:45 **Coffee break**

10:45 – 12:25 **Session II**

Chairperson: K. Gofryk

- 10:45 – 11:10 P. M. Oppeneer
 “The hidden order phase of URu_2Si_2 – An update on the status of its
 current understanding”
- 11:10 – 11:35 Z. Gajek and K. Durczewski
 “Influence of localized electrons on physical properties of the series
 $\text{UT}_2\text{Al}_{10}$ (T = Fe, Ru, Os) and REIn_3 ”
- 11:35 – 12:00 L. Sandratskii
 “Dzyaloshinskii-Moriya interaction and local magnetic anisotropies in
 $\text{U}_2\text{Pd}_2\text{In}$: Ground state and metamagnetic transition”
- 12:00 – 12:25 A. L. Kozub, A. B. Shick, T. Klimczuk
 “Electronic structure and magnetic properties of NpPt_2In_7 ”

13:00 – 14:00 **Lunch**

15:00 – 16:40 **Session III**

Chairperson: L. Havela

- 15:00 – 15:25 M. Werwiński, A. Szajek
“Occupation deficiency in layered structures of UNi_xSb_2 ($0 \leq x \leq 1$) studied by density functional theory supercell calculations”
- 15:25 – 15:50 S.Sowa, N.T.H. Kim-Ngan, M. Krupska, M. Paukov, V. Buturlim, L.Havela
“U alloyed with selected *d*-metals: Structure and superconductivity”
- 15:50 – 16:15 J.E. Sutcliffe, T. Cartwright, P. Ryan, T.B. Scott, R.S. Springell
“The Isothermal Martensitic Transformation in Metastable Uranium Alloys”
- 16:15 – 16:40 S. Maskova, Amir Hen, Michal Gelbstein, Itzhak Orion, Itzhak Halevy
“Superconductivity in High Entropy Alloys - attempts to find Uranium containing High Entropy Alloy”

16:40 – 17:10 **Coffee break**

17:10 – 18:50 **Session IV**

Chairperson: M. Pasturel

- 17:10 – 17:35 V. Sladkov, A.A. Bessonov, A.M. Fedosseev, I.A.Charushnikova
“Complexation of U(VI) and Pu(VI) with succinic acid in aqueous acid solutions”
- 17.35 – 18:00 M. Saab, F. Réal, M. Šulka, F. Viro, L. Cantrel, V. Vallet
“Quantum chemical prediction of standard formation enthalpies of uranyl nitrates and its degradation products”
- 18:00 – 18:25 F. Calard, A. Charlot, A. Leydier, F. Cuer, A. Grandjean
“Hybrid Mesoporous Silicas Design For Uranium Extraction From Sulfuric Media”
- 18:25 – 18:50 I. Izosimov
“Laser Spectroscopy and Detection of Actinides/Lanthanides in Biological Samples”

19:00 – 20:00 **Dinner**

20:00 – 22:00 **Poster session**

TUESDAY, 28th March 2017

9:00 – 10:15 **Session V**

Chairperson: L. Sandratskii

- 9:00 – 9:25 B. Dorado, J. Bieder, M. Torrent
“Full first-principles calculation of Pu self-diffusion coefficient in Pu-Ga“
- 9:25 – 9:50 D. Legut, U. D. Wdowik, P. Piekarczyk, G. Jaglo
“Electron correlations and spin-orbit coupling for lattice dynamics of UC and UO₂”
- 9:50 – 10:15 L. Andrea, P. Garcia, M. Torrent, B. Dorado
“Ab-initio calculation of oxygen interstitial diffusion mechanism in uranium dioxide UO₂ with paramagnetic ordering”

10:15 – 10:45 **Coffee break**

10:45 – 12:25 **Session VI**

Chairperson: J. Grin

- 10:45 – 11:10 A. Leithe-Jasper, R. Gumeniuk, J. Grin
“New actinide-based intermetallic compounds”
- 11:10 – 11:35 A.P. Gonçalves, I.C. Santos, E.B. Lopes, L.C.J. Pereira, M.S. Henriques, N. Zahurakova, V. Kontul', M. Reiffers
“U₂Sb: a novel binary uranium antimonide”
- 11:35 – 12:00 K. Domieracki, D. Kaczorowski
“Comparative study of superconductivity in non-centrosymmetric silicides ThTESi (TE = Co, Ni, Pt)”
- 12:00 – 12:25 D. Gnida, P. Swatek
“Quantum interference in disordered Th₂CoSi₃”

13:00 – 14:00 **Lunch**

EXCURSION OR FREE TIME

19:00 – 20:00 **Dinner**

20:00 – 22:00 **Structured discussion**

WEDNESDAY, 29th March 2017

9:00 – 10:15 Session VII

Chairperson: B. Dorado

- 9:00 – 9:25 J. Jung, M. Atanasov, F. Neese
“Ab initio ligand field analysis and covalency trends in lanthanide and actinide free ions and octahedral complexes”
- 9:25 – 9:50 S. Kervazo, F. Réal, F. Viro, A. S. P. Gomes, M. Olejniczak, P. Ayers, V. Vallet
”Relativistic correlated calculations of the thermodynamics properties of gaseous plutonium oxides”
- 9:50 – 10:15 S. T. Murphy, C. Degueldre
“On the state of Xe,Kr nature in actinide oxides: a solid study”

10:15 – 10:45 Coffee break

10:45 – 12:25 Session VIII

Chairperson: A. Gonçalves

- 10:45 – 11:10 L. Havela, M. Paukov, V. Buturlim, I. Tkach, D. Drozdenko, M. Cieslar, S. Mašková, M. Dopita, Z. Matěj
“Electrical resistivity of nanocrystalline Uranium hydrides affected by static and dynamic disorder”
- 11:10 – 11:35 P. Höhn, A. Amon, M. Bobnar, W. Schnelle, Y. Grin
“New ternary uranium nitrides”
- 11:35 – 12:00 S. Maskova, K. Miliyanchuk, L. Havela
“Hydrogen absorption in U_3Si_2 and its impact on electronic properties”
- 12:00 – 12:25 V. Buturlim, L. Havela, S. Sowa, N.T.H. Kim-Ngan, M. Paukov, D. Drozdenko, M. Dopita, P. Minarik, S. Mašková
„Development of bcc phase in $U_{1-x}Ti_x$ system ($x = 0.05-0.50$) and magnetic properties of related hydrides“

13:00 – 14:00 Lunch

15:00 – 16:40 **Session IX FINUG**

Chairperson: A. Pikul

15:00 – 15:40 K. Gofryk, M. Jaime, A. Saul, M. Salamon, V.S. Zapf, N. Harrison, T. Durakiewicz, J.C. Lashley, D.A. Andersson, C. Stanek, J.L. Smith
“Unusual thermal behavior of uranium dioxide”

15:40 – 16:20 M. Pasturel, A. Pikul
“Phase formation, crystallographic relations and physical properties in the U-T-Ge ternary systems (T = transition metal from columns 8 to 11): a comparative review”

16:20 – 16:40 M. Szlawska, D. Gnida, M. Daszkiewicz, D. Kaczorowski
“Magnetic ordering in single-crystalline URhGe₂”

16:40 – 17:10 **Coffee break**

17:10 – 18:00 **Session X**

Chairperson: I. Halevy

17:10 – 17:35 E. Lawrence Bright, S. Rennie, J. Darnbrough, D. Goddard, R. Springell
“Uranium Nitride Thin Films for Accident Tolerant Fuels Research”

17:35 – 18:00 A. Keatley, T. Scott, R. Awbery
“An investigation into the heterogeneity of vein type uranium ore deposits: Implications for nuclear forensic analysis”

18:00 – 18:25 **Summary and prospects**

20:00 – 22:00 **Conference banquet**

THURSDAY, 30th March 2017

Departure by shuttle bus