

**Program for EMN Orlando Meeting
December 11-15, 2016**

Sunday December 11

14:00-18:00 PM

Onsite Registration & Sign up

Monday December 12

Room A

Session: Magnetocaloric Materials I Chair: Mimoun El Marssi

9:00-9:25 AM

A01: Lattice dynamics, local order, and magnon-phonon coupling in Ni₄₅Co₅Mn_{36.6}In_{13.4}

Paul Stonaha, Oak Ridge National Lab, USA

9:25-9:50 AM

A02: Cryogenic magnetic refrigeration in zircon type rare earth vanadates

Saurav Giri, Indian Association for the Cultivation of Science, India

9:50-10:15 AM

A03: Chemistry of RE₅X₄ Magnetocaloric Phases: Interplay between Electron Concentration and Crystal Structure

Yurij Mozharivskyj, McMaster University, Canada

10:15-10:30 AM

Session Break

Session: Actinide separation Chair:

10:30-10:55 AM

A04: Redox chemistry of neptunium in irradiated solution

Bruce Mincher, Aqueous Separations and Radiochemistry Department, Idaho National Laboratory (INL).

10:55-11:20 AM

A05: N,O-hybrid donor ligands for selective recognition and separation of f-elements by solvent extraction

Masahiko Nakase, Japan Atomic Energy Agency, Material Science Research Center, Actinide Chemistry Group, Japan.

11:20-11:45 PM

A06: Liquid-liquid extraction of uranium(VI) from aqueous solution using 1-hydroxyalkylidene-1,1-diphosphonic acids

Mustapha Bouhoun Ali, Nuclear Research Center of Draria, Algeria

12:00-13:30 PM

Lunch Break

Monday December 12 Room A Afternoon

Session: Actinides and the Environment Chair:

13:55-14:20 PM	A07: The characterization of uranium atmospheric releases from nuclear fuel settlements in the terrestrial environment	Laurent Pourcelot , IRSN Cadarache, France
14:20-14:45 PM	A08: Long-term effects from former uranium mining and remediation activities on the Mulde River and there floodplains in eastern Germany	Stefan Bister , Environmental Science, Leibniz Universität Hannover, Germany
14:45-15:10 PM	A09: Thermophysical Properties of U and UO ₂ : A First Principles Study	Jianguo Yu , Pacific Northwest National Laboratory, United States
15:10-15:25 PM	Session Break	

Session: Electrocaloric Materials I Chair: Saurav Giri

15:25-15:50 PM	A10: Electrocaloric measurements in lead-free (Ge, Zr, Te)-modified Ba _{0.8} Ca _{0.2} TiO ₃ ceramics	Mimoun El Marssi , Université de Picardie Jules Verne, France
15:50-16:15 PM	A11: Physical and technical limits of electrocaloric cooling devices	Gunnar Suchaneck , Technische Universität Dresden, Germany
16:15-16:40 PM	A12: Electrocaloric effect in lead-free relaxor ferroelectric ceramics	Anna-Karin Axelsson , London South Bank University, UK
16:40 – 17:05 PM	A13: Caloric effects in soft materials	Zdravko Kutnjak , Jozef Stefan Institute, Slovenia
18:00 PM	Dinner Social	

Tuesday December 13**Room A****Session: Magnetocaloric Materials II Chair: Lucas Ferreira**

9:05-9:30 AM	A14: Near Room Temperature Magnetocaloric Nanostructured Materials and Thin films	Ahmed El-Gendy , Virginia Commonwealth University, USA
9:30-9:55 AM	A15: Stress dependent transforming behaviors and associated mechanocaloric effect in strain glass alloys	Yu Wang , Xi'an Jiaotong University, China
9:55-10:20 AM	A16: Behavior of the Brayton and Ericsson cycles efficiencies of Tesla type thermomagnetic motors working with materials presenting first and second order magnetic transitions	Sergio Gama , São Paulo Federal University, Brazil
10:20-10:35 AM	Session Break	
Session: Properties of Actinides Chair:		
10:35-11:00 AM	A17: Relativistic energy-consistent pseudopotentials and its application to actinides	Xiaoyan Cao , Institute for theoretical chemistry, Universität zu Köln, Germany
11:00-11:25 AM	A18: Coordination Chemistry of Uranyl(V): Structure, Electronic Spectrum, and Reactivity Arising from 5f1 Configuration	Koichiro Takao , Laboratory for Advanced Nuclear Energy, Institute of Innovative Research, Tokyo Institute of Technology, Japan.
11:25-11:50 AM	A19: TBC	Gholamreza vahedi sarrigani , Materials Synthesis and Characterization Laboratory, Institute of Advanced Technology, Universiti Putra Malaysia, Malaysia
12:05-13:30 PM	Lunch Break	

Tuesday December 13**Room A Afternoon****Session: Actinide material****Chair:**

13:55-14:20	A20: Insights into point-defects of δ -Pu and δ -Pu-Ga alloys using density functional theory	Sarah Christine Hernandez , Los Alamos National Laboratory, USA
14:20-14:45	A21: Plutonium hexaborides as a topological insulator	Xiaoyu Deng , Rutgers University, USA
14:45-15:10	A22: Phase Stability of Pu-based Alloys: A CALPHAD Thermodynamic study	Aurelien Perron , Materials Science Division, Lawrence Livermore National Laboratory, USA
15:10-15:25 PM	Session Break & Poster	
	P01: Magnetocaloric studies on certain magnetoelectric gadolinium manganites and hexaferrites	Aditya Wagh , Indian Institute of Science, India
Session: Magnetocaloric Materials III		
Chair: Ahmed El-Gendy		
15:25-15:50 PM	A23: In Situ Electron Microscopy of Ni-Mn-Ga Magnetocaloric Alloy	Roozbeh Nikkhah-Moshaie , Florida International University, USA
15:50-16:15 PM	A24: Magnetocaloric and barocaloric effect in $\text{La}(\text{Fe},\text{Si})_{13}$ and MM'X materials	Feng-xia Hu , Institute of Physics, CAS, China
16:15-16:40 PM	A25: Thermomagnetic motors principles and performance calculation	Lucas Ferreira , University of São Paulo, Brazil
16:40 – 17:05 PM	A26: Thermodynamic assessment of the Samarium-Gold binary system	Dris Moustaine , Ibn Zohr University, Morocco
18:00 PM	Dinner Social	

Wednesday December 14**Room A****Session: Magnetocaloric Materials IV Chair: Jaehwan Kim**

8:55-9:20 AM	A27: Giant rotating magnetocaloric effect induced by highly texturing in polycrystalline DyNiSi compounds	Hu Zhang , University of Science and Technology Beijing, China
9:20-9:45 AM	A28: Entropy change during normal and reentrant martensitic transformations in NiMn- and CoCr-based Heusler alloys	Xiao Xu , Tohoku University, Japan
9:45-10:10 AM	A29: Research on the magnetocaloric $Mn_xFe_{2-x}(P_{1-y}Ge_y)$ alloys	Danmin Liu , Beijing University of Technology, China
10:10-10:25 AM	Session Break	
Session: General Chair:		
10:25-10:50 AM	A30: How to we advance a solution of nuclear waste storage: A focus on the back end of the fuel cycle	Annie Kersting , University Relations and Science Education Lawrence Livermore National Laboratory
10:50-11:15 AM	A31: Radiation Induced Phase Transformation and Microstructural Evolution of Nanostructured ZrO ₂	Fengyuan Lu , Mechanical & Industrial Engineering, Louisiana State University, USA
11:15-11:40 AM	A32: Exploring actinide magnetism with XMCD	Nicola MAGNANI , Joint Research Centre Nuclear Safety and Security, Germany
11:40-12:05 PM	A33: TBC	Laszlo Lakosi , Institute of Isotope and Surface Chemistry, Hungary
12:05-13:30 PM	Lunch Break	

Wednesday December 14 Room A Afternoon

Session: Electrocaloric Materials II Chair: Le Zhou

13:55-14:20 PM	A34: Antiferroelectrics: positive or negative electrocaloric response?	Nikola Novak , Technische Universität Darmstadt, Germany
14:20-14:45 PM	A35: Zinc oxide – cellulose hybrid nanocomposites and their energy harvesting applications	Jaehwan Kim , Inha University, South Korea
14:45-15:10 PM	A36: Multicaloric effect during nerve action	Matjaz Valant , University of Nova Gorica, Slovenia
15:10-15:25 PM	Session Break	
Session: Magnetocaloric Materials V Chair: Nikola Novak		
15:25-15:50 PM	A37: High-field X-ray diffraction studies for Mn-based magnetic functional materials	Yoshifuru Mitsui , Kagoshima University, Japan
15:50-16:15 PM	A38: Compositional Dependent Interdiffusion, Crystallography and Mechanical Properties of Magnetocaloric Ni-Mn-Ga Alloys	Le Zhou , University of Central Florida, USA
16:15-16:40 PM	A39: Magnetic and magnetocaloric properties of RM ₂ Laves phases compounds (R = Er, Tb, Ho and M = Fe, Co)	Othmani Safa , Faculté des Sciences de Sfax, Tunisie
16:40 – 17:05 PM	A40: TBA	Changqing Jin , Institute of Physics, CAS, China
18:00 PM	Dinner Social	

Thursday December 15

One day academic exchange & excursion