

nanoGe Fall Meeting19 (NGFM19)

#RadDet19. Radiation Detection Semiconductors Materials, Physics and Devices

Berlin, Germany, 2019 November 4th - 5th

Conference Chairs: Mahshid Ahmadi and Germà Garcia-Belmonte

Conference Program

November 4th - Day 2 (Monday)	
Plenary Session	
09:00 - 09:30 Session-K1	<u>Efrat Lifshitz</u> (<i>Schulich Faculty of Chemistry, Solid State Institute, Russell Berrie Nanotechnology Institute and the Helen Diller Quantum Information Center; Technion, Haifa, Israel</i>), Maksym Kovalenko, Andrew Rappe The Effect of Magnetism on the Optical Properties of Bulk and Confined Perovskite Structures
09:00 - 09:30 Session-K2	<u>Daniel Nocera</u> (<i>Harvard University</i>) Sustainable and Renewable Carbon and Nitrogen Cycles for Fuel and Crop Production
RadDet	
09:30 - 10:00 RadDet-I1	Fei Ye, <u>Wallace C.H. Choy</u> (<i>Department of Electrical and Electronic Engineering, The University of Hong Kong</i>) A new kind of Cuboid CH ₃ NH ₃ PbI ₃ Single Crystals for Highly Performed X-ray and Photon Detectors
10:00 - 10:30 RadDet-I2	<u>Lei R. Cao</u> (<i>1. Nuclear Engineering Program, Department of Mechanical and Aerospace Engineering, The Ohio State University, Columbus, Ohio, 43210, USA</i>), Lei Pan, Yuanxiang Feng, Praneeth Kandlakunta, Jinsong Huang Acquisition and Evaluation of Gamma-ray Energy Spectrum with CsPbBr ₃
10:30 - 11:00	Coffee Break
RadDet	
11:00 - 11:30 RadDet-I1	<u>Gebhard J. Matt</u> (<i>I-Meet Lehrstuhl für Werkstoffe der Elektronik- und Energietechnik, FAU University</i>), Ievgen Levchuk, Judith Knüttel, Shreetu Shrestha, Johannes Dallmann, Rainer Hock, Wolfgang Heiss, Christoph J. Brabec High Performance X-ray to Current Converters Fabricated Via Sintering or Melting of a Metal-halide Perovskite
11:30 - 12:00 RadDet-O1	<u>Yadong Xu</u> (<i>Key Laboratory of Radiation Detection Materials and Devices</i>) Solution-processed Metal Halide Perovskites for Nuclear Radiation Detection
12:00 - 12:30 RadDet-O2	Maximilian Schultz, Nico Leupold, Ralf Moos, <u>Fabian Panzer</u> (<i>Soft Matter Optoelectronics, Department of Physics, University of Bayreuth, Bayreuth 95440, Germany</i>) A Solvent free Route for Halide Perovskite Film Processing Based on Pressure Treatment of Perovskite Powders
12:30 - 14:00	Lunch
RadDet	
14:00 - 14:30 RadDet-I1	<u>Xiaogang Liu</u> (<i>National University of Singapore</i>) All-inorganic Perovskite Nanocrystal Scintillators
14:30 - 15:00 RadDet-I2	<u>Mao-Hua Du</u> (<i>Oak Ridge National Laboratory</i>) Self-Activated Low-Dimensional Metal Halide Phosphors and Scintillators
15:00 - 15:30 RadDet-I3	<u>Michael Saliba</u> (<i>TU Darmstadt</i>) Bright and Fast Scintillation of Organolead Perovskite MAPbBr ₃ at Low Temperatures
15:30 - 16:00	Coffee Break
RadDet 1.4	

16:00 - 16:30 Ferdinand Grozema (*Department of Chemical Engineering, Delft University of Technology, The Netherlands*)
1.4-O1 Radiation-induced conductivity in 3D and 2D hybrid perovskites

November 5th - Day 3 (Tuesday)

Plenary Session

08:30 - 09:00 Juan Bisquert (*1 Institute of Advanced Materials (INAM), Universitat Jaume I, Castellon, 12006 (Spain)*)
Session-K1 Understanding Time Scales of Ionic and Electronic Phenomena in Perovskite Solar Cells

08:30 - 09:00 William Tisdale (*Massachusetts Institute Of Technology*)
Session-K2 Nonequilibrium Dynamics of Excitons and Charges in Semiconductor Nanomaterials

RadDet 2.1

09:00 - 09:30 Eric Lukosi (*Department of Nuclear Engineering, University of Tennessee, Knoxville, TN 37996*), Jeremy Tisdale,
2.1-I1 Travis Smith, Ryan Tan, Bogdan Dryzhakov, Andrew Shayotovich, Andrew Naylor, Kate Higgins, Jessica Charest, Bin Hu, Mahshid Ahmadi
Engineering Hybrid Perovskite Materials for Spectroscopic Sensing of Ionizing Radiation

09:30 - 10:00 Yadong Xu (*MIT Key Laboratory of Radiation Detection Materials and Devices*)
2.1-I2 The Progress on Solution-processed Metal Halide Perovskites for Nuclear Radiation Detection in NPU

10:00 - 10:30 Sergii Yakunin (*Laboratory for Thin Films and Photovoltaics, Empa – Swiss Federal Laboratories for Materials Science and Technology, CH-8600 Dübendorf, Switzerland*), Maksym Kovalenko
2.1-I3 Solution-processed metal halide perovskites of various dimensionalities for hard-radiation detection using direct conversion and scintillation

10:30 - 11:00 **Coffee Break**

RadDet 2.2

11:00 - 11:30 Guangda Niu (*Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, Wuhan City, Hubei Province, China, 430074*), Bo Yang, Weicheng Pan, Haodi Wu, Jiang Tang
2.2-I2 X-ray Detection and Imaging Based on Lead-free Double Perovskites

11:30 - 12:00 K. P. Gradwohl, O. Gybin, J. Janicskó-Csáthy, N. Abrosimov, R. R. Sumathi (*Leibniz Institute for Crystal Growth (IKZ)*)
2.2-I1 High Purity Germanium Crystals for Detector Application - the Path Traveled so far and the Way Ahead

12:30 - 14:00 **Lunch**

14:00 - 15:30 **RadDet 2.3**

15:30 - 16:00 **Coffee Break**

16:00 - 17:00 **RadDet 2.4**

17:00 - 19:00 **Poster Session**