



## 14<sup>th</sup> International Conference on Scintillating Materials and their Applications

### SCIENTIFIC PROGRAM

Abstracts are available online on the SCINT website: <http://cern.ch/scint2017/>  
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	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
08:00	REGISTRATION	REGISTRATION	REGISTRATION	REGISTRATION	REGISTRATION
09:00	OPENING CEREMONY	CRYSTAL GROWTH	NANO-MATERIALS	SCINTILLATION MECHANISMS	CRYSTAL GROWTH
10:00	COFFEE	POSTER SESSION #1	POSTER SESSION #2	POSTER SESSION #3	COFFEE
11:00	OPENING SESSION	NOVEL MATERIALS	META-MATERIALS	CHARACTERIZATION	APPLICATIONS
12:00	WELCOME DRINK				CONFERENCE CLOSING
13:00					
14:00					
15:00	APPLICATIONS	SCINTILLATION MECHANISMS	EXCURSION	INDUSTRIAL EVENT - COST ACTION TD1401 FAST	
16:00	COFFEE	COFFEE			
17:00	APPLICATIONS	CHARACTERIZATION		COFFEE	
18:00				ROUND TABLE	
19:00					
20:00	BUFFET MONTAGNARD	IAC MEETING [RESTRICTED]			
21:00	HISTORY OF CHAMONIX				
22:00				CONFERENCE BANQUET	
23:00					

Registration	Sunday 16:30-20:00
Registration	Monday 07:45-09:00
<b>Opening Ceremony</b>	<b>Monday 09:00-10:00</b>
Session Chair: Etienne Auffray, Christian Pédrini	
<b>09:00 Welcome Address</b>	
<u>E. Auffray</u> <sup>1</sup>	
<sup>1</sup> <i>CERN (CH)</i>	
<b>09:30 25 years of SCINT conferences</b>	
<u>W. Moses</u> <sup>1</sup>	
<sup>1</sup> <i>Lawrence Berkeley National Laboratory (US)</i>	
Coffee	Monday 10:00-10:30
<b>Opening Session</b>	<b>Monday 10:30-12:00</b>
Session Chair: Etienne Auffray, Christian Pédrini	
<b>10:30 Advances in Scintillators for Nuclear Security</b>	
<u>C. Melcher</u> <sup>1</sup> , M. Zhuravleva <sup>1</sup> , L. Stand <sup>1</sup> , M. Koschan <sup>1</sup> , M. Loyd <sup>1</sup> , A. Lindsey <sup>1</sup>	
<sup>1</sup> <i>University of Tennessee (US)</i>	
<b>11:00 Studies of precision time-tagging of charged tracks with scintillating crystals for the phase-II upgrade of CMS</b>	
<u>T. Tabarelli de Fatis</u> <sup>1</sup>	
<sup>1</sup> <i>Universita &amp; INFN, Milano-Bicocca (IT)</i>	
<b>11:30 The 10ps Time-of-Flight PET challenge: Myth or reality?</b>	
<u>P. Lecoq</u> <sup>1</sup>	
<sup>1</sup> <i>CERN (CH)</i>	
Welcome Drink	Monday 12:00-13:00

<b>Applications #1</b>	<b>Monday 14:30-16:30</b>
Session Chair: Paul Lecoq	
<b>14:30 Fiber-based Calorimeters for High Energy Physics</b>	
<u>K. Pauwels</u> <sup>1</sup> on behalf of the INTELUM collaboration	
<sup>1</sup> <i>Universita &amp; INFN, Milano-Bicocca (IT)</i>	
<b>15:00 Applications of Very Fast Inorganic Crystal Scintillators for Future HEP Experiments</b>	
<u>R.Y. Zhu</u> <sup>1</sup>	
<sup>1</sup> <i>California Institute of Technology (US)</i>	
<b>15:15 Composite scintillators for high energy physics</b>	
A. Boyarintsev <sup>1</sup> , A. Bobovnikov <sup>1</sup> , <u>A. Gektin</u> <sup>1</sup> , B. Grynyov <sup>1</sup> , I. Gerasymov <sup>1</sup> , S. Kovalchuk <sup>1</sup> , T. Nepokupnaya <sup>1</sup> , Y. Onufriyev <sup>1</sup> , O. Sidletskiy <sup>1</sup>	
<sup>1</sup> <i>Institute for Scintillation Materials, NAS (UA)</i>	
<b>15:30 Design and status of the Mu2e crystal calorimeter</b>	
<u>E. Diociaiuti</u> <sup>1</sup> on behalf of the Mu2e collaboration	
<sup>1</sup> <i>LNF - INFN (IT)</i>	
<b>15:45 Development of a Crystal Calorimeter for the Electron Ion Collider</b>	
<u>C. Woody</u> <sup>1</sup> , A. Kiselev <sup>1</sup> , M. Purschke <sup>1</sup> , S. Stoll <sup>1</sup> , T. Horn <sup>2</sup> , C. Munoz Camacho <sup>3</sup> , R. Zhu <sup>4</sup>	
<sup>1</sup> <i>Brookhaven National Laboratory (US)</i> , <sup>2</sup> <i>Catholic University of America (US)</i> , <sup>3</sup> <i>Institute de Physique Nucleaire, Orsay (FR)</i> , <sup>4</sup> <i>California Institute of Technology (US)</i>	
<b>16:00 High-Quality Lead Tungstate Crystals for PANDA</b>	
K.T. Brinkmann <sup>1</sup> , H.G. Zaunick <sup>2</sup> , J. Houzvicka <sup>3</sup> , S. Ochesanu <sup>3</sup> , R. Novotny <sup>2</sup> , V. Dormenev <sup>2</sup> , M. Korjik <sup>4,5</sup> , D. Petrydes <sup>3</sup>	
<sup>1</sup> <i>Bonn University (DE)</i> , <sup>2</sup> <i>Justus Liebig University Giessen (DE)</i> , <sup>3</sup> <i>CRYTUR Ltd. (CZ)</i> , <sup>4</sup> <i>Institute for Nuclear Problems, BSU (BY)</i> , <sup>5</sup> <i>NRC Kurchatov Institute - IREA, Moscow (RU)</i>	
<b>16:15 Predicting the performance of the CMS precision PbWO4 electromagnetic calorimeter in the HL-LHC era from test beam results on irradiated crystals</b>	
<u>A. Zghiche</u> <sup>1</sup> on behalf of the CMS collaboration	
<sup>1</sup> <i>LAPP-CNRS (FR)</i>	
Coffee	Monday 16:30-17:00

Session Chair: Ioan Dafinei

**17:00 Search for new Molybdenum based crystal scintillators for neutrino-less double beta decay search**H. Kim<sup>1</sup>, I. Pandey<sup>1</sup>, A. Khan<sup>1</sup>, J. Son<sup>2</sup>, M. Lee<sup>2</sup>, Y. Kim<sup>2</sup>, Y. Kim<sup>2</sup>, J. Lee<sup>1</sup><sup>1</sup>Kyungpook National University (KR), <sup>2</sup>Institute of Basic Science (KR)**17:15 Optical and luminescent properties of <sup>40</sup>Ca<sup>100</sup>MoO<sub>4</sub> single crystals**A. Kozlova<sup>1</sup>, E. Zabelina<sup>1</sup>, N. Kozlova<sup>1</sup>, O. Buzanov<sup>2</sup>, D. Spassky<sup>1,3,4</sup>, A. Chernykh<sup>1</sup><sup>1</sup>National University of Science and Technology MISiS (RU), <sup>2</sup>Fomos-Materials Ltd. (RU), <sup>3</sup>Skobeltsyn Institute of Nuclear Physics (RU), <sup>4</sup>Lomonosov Moscow State University, Materials Science Department (RU)**17:30 Scintillation Properties of (Zn,Mg)WO<sub>4</sub> for Dark Matter Search**S. Kurosawa<sup>1</sup>, H. Sekiya<sup>2</sup>, T. Horiai<sup>1</sup>, A. Yamaji<sup>1</sup>, S. Kodama<sup>1</sup>, R. Murakami<sup>3</sup>, Y. Shoji<sup>1</sup>, Y. Ohashi<sup>4</sup>, Y. Yokota<sup>4</sup>, K. Kamada<sup>1,3,5</sup>, A. Yoshikawa<sup>1</sup>, A. Ohnishi<sup>6</sup>, M. Kitaura<sup>6</sup><sup>1</sup>Tohoku University (JP), <sup>2</sup>University of Tokyo (JP), <sup>3</sup>C&A Corp. (JP), <sup>4</sup>Institute for Materials Research, Tohoku University (JP), <sup>5</sup>NICHe, Tohoku University (JP), <sup>6</sup>Yamagata University, Department of Physics (JP)**17:45 Calibration and Performance of a 3D Imaging Calorimeter of DAMPE for Cosmic Ray Physics on Orbit**L. Wu<sup>1</sup>, Y. Zhang<sup>1</sup><sup>1</sup>University of Science and Technology of China (CN)**18:00 Low-temperature studies of the scintillation of pure cesium iodide for cryogenic scintillator detectors**M. Clark<sup>1</sup>, P. Di Stefano<sup>1</sup><sup>1</sup>Queen's University (CA)**18:15 Scintillation properties of n-type GaAs at cryogenic temperatures**S. Derenzo<sup>1</sup>, G. Bizarri<sup>1</sup>, E. Bourret<sup>1</sup><sup>1</sup>Lawrence Berkeley National Laboratory (US)**18:30 The liquid scintillator for JUNO experiment**S. Xie<sup>1</sup> on behalf of the JUNO collaboration<sup>1</sup>Institute of High Energy Physics (CN)

Buffet Montagnard Monday 19:30-20:30

History of Chamonix - by Claire Burnet Monday 20:30-21:30

Session Chair: Chuck Melcher

**08:30 Crystal Growth and Engineering of Inorganic Scintillators**

E. Bourret<sup>1</sup>, G. Bizarri<sup>1</sup>, M. Del Ben<sup>1</sup>, A. Canning<sup>1</sup>, T. Shalapska<sup>1</sup>, D. Perrodin<sup>1</sup>, R. dos Reis<sup>1</sup>, J. Derby<sup>2</sup>, A. Tremsin<sup>3</sup>, S. Vogel<sup>4</sup>, R. Williams<sup>5</sup>, S. Kerisit<sup>6</sup>

<sup>1</sup>Lawrence Berkeley National Laboratory (US), <sup>2</sup>University of Minnesota (US), <sup>3</sup>Space Sciences Laboratory, University of California (US), <sup>4</sup>Los Alamos National Laboratory (US), <sup>5</sup>Wake Forest University (US), <sup>6</sup>Pacific Northwest National Laboratory (US)

**09:00 Growth and characterization of eutectic scintillator taking the advantage of composite material**

A. Yoshikawa<sup>1,2,3</sup>, K. Kamada<sup>1,2,3</sup>, S. Kurosawa<sup>2</sup>, Y. Yokota<sup>2</sup>, A. Yamaji<sup>1</sup>, V. Chani<sup>1</sup>, Y. Ohashi<sup>2</sup>

<sup>1</sup>Institute for Materials Research, Tohoku University (JP), <sup>2</sup>NICHe, Tohoku University (JP), <sup>3</sup>C&A Corp. (JP)

**09:15 Growth and characterization of SrI<sub>2</sub>:Eu crystals grown by the Czochralski method**

E. Galenin<sup>1</sup>, O. Sidletskiy<sup>1</sup>, C. Dujardin<sup>2</sup>, A. Gektin<sup>1</sup>

<sup>1</sup>Institute for Scintillation Materials, NAS (UA), <sup>2</sup>Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR)

**09:30 Garnet scintillators, obtained by 3D printing**

G. Dosovitskiy<sup>1</sup>, P. Karpyuk<sup>1</sup>, P. Evdokimov<sup>2</sup>, D. Kuznetsova<sup>1</sup>, V. Mechinsky<sup>3</sup>, A. Borisevich<sup>3</sup>, A. Fedorov<sup>3</sup>, V. Putlayev<sup>2</sup>, A. Dosovitskiy<sup>4</sup>, M. Korjik<sup>1,3</sup>

<sup>1</sup>NRC Kurchatov Institute - IREA, Moscow (RU), <sup>2</sup>Lomonosov Moscow State University, Materials Science Department (RU), <sup>3</sup>Institute for Nuclear Problems, BSU (BY), <sup>4</sup>NeoChem JSC (RU)

**09:45 In-situ diagnostics of phase separation and segregation during growth of Cs<sub>2</sub>LiLaBr<sub>6</sub>:Ce scintillator crystals by energy-resolved neutron imaging**

A. Tremsin<sup>1</sup>, D. Perrodin<sup>2</sup>, A. Losko<sup>3</sup>, S. Vogel<sup>3</sup>, M. Bourke<sup>3</sup>, J. Peterson<sup>4</sup>, C. Zhang<sup>4</sup>, J. Derby<sup>4</sup>, T. Shinohara<sup>5</sup>, G. Bizarri<sup>2</sup>, E. Bourret<sup>2</sup>

<sup>1</sup>Space Sciences Laboratory, University of California (US), <sup>2</sup>Lawrence Berkeley National Laboratory (US), <sup>3</sup>Los Alamos National Laboratory (US), <sup>4</sup>University of Minnesota (US), <sup>5</sup>Japan Atomic Energy Agency (JP)

Session Chair: Rémi Chipaux, Kristof Pauwels, Marco Pizzichemi

[Posters of this session are listed on page 21]

Session Chair: Aleksander Gektin

**11:00 Emerging Concepts in Organic Radiation Detection Materials**

P. Feng<sup>1</sup>, J. Carlson<sup>1</sup>

<sup>1</sup>Sandia National Laboratories (US)

**11:30 Novel all-solid-state hybrid film-crystal scintillators based on the epitaxial structures of garnet compounds**

Y. Zorenko<sup>1</sup>, V. Gorbenko<sup>1</sup>, T. Zorenko<sup>1</sup>, S. Witkiewicz<sup>1</sup>, O. Sidletskiy<sup>2</sup>, I. Gerasymov<sup>2</sup>, P. Arhipov<sup>2</sup>, A. Fedorov<sup>3</sup>, J. Mares<sup>4</sup>, M. Nikl<sup>4</sup>

<sup>1</sup>Institute of Physics, Kazimierz Wielki University (PL), <sup>2</sup>Institute for Scintillation Materials, NAS (UA), <sup>3</sup>SSI Institute for Single Crystals, NAS of Ukraine (UA), <sup>4</sup>Institute of Physics of the Czech Academy of Sciences (CZ)

**11:45 Discovery, crystal growth and scintillation properties of TI-based scintillators**

H. Kim<sup>1</sup>, G. Rooh<sup>2</sup>, A. Khan<sup>1</sup>, S. Kim<sup>3</sup>

<sup>1</sup>Kyungpook National University (KR), <sup>2</sup>Abdul Wali Khan University (PK), <sup>3</sup>Cheongju University (KR)

**12:00 Cesium Hafnium Chloride, a Non-Hygroscopic, High-Performance Scintillator**

S. Lam<sup>1</sup>, A. Burger<sup>2</sup>, S. Motakef<sup>1</sup>

<sup>1</sup>CapeSym, Inc. (US), <sup>2</sup>Fisk University (US)

**12:15 Neutron detection and High resolution imaging using large area 6Li<sub>x</sub>Na<sub>1-x</sub>I:Eu**

M. Marshall<sup>1</sup>, M. Moore<sup>1</sup>, H. Bhandari<sup>1</sup>, R. Riedel<sup>2</sup>, S. Waterman<sup>1</sup>, J. Crespi<sup>1</sup>, P. Nickerson<sup>1</sup>, S. Miller<sup>1</sup>, V. Nagarkar<sup>1</sup>

<sup>1</sup>Radiation Monitoring Devices, Inc. (US), <sup>2</sup>Oak Ridge National Laboratory, Neutron Scattering Science Division (US)

**12:30 Scintillation properties of advanced LuAG:Ce optical ceramic materials**

Y. Pan<sup>1</sup>, J. Mares<sup>2</sup>, C. Hu<sup>1</sup>, C. D'Ambrosio<sup>3</sup>, H. Kou<sup>1</sup>, J. Li<sup>1</sup>, V. Babin<sup>2</sup>, A. Beitlerova<sup>2</sup>, M. Nikl<sup>2</sup>, S. Liu<sup>1</sup>, X. Feng<sup>1</sup>, S. Omelkov<sup>4</sup>, A. Krasnikov<sup>4</sup>

<sup>1</sup>Shanghai Institute of Ceramics, Chinese Academy of Sciences (CN),

<sup>2</sup>Institute of Physics of the Czech Academy of Sciences (CZ), <sup>3</sup>CERN, PH-LHB Group (CH), <sup>4</sup>Institute of Physics, University of Tartu (EE)

**Lunch** Tuesday 12:45-14:30

**Scintillation Mechanisms #1** Tuesday 14:30-16:00

Session Chair: Richard Williams

**14:30 The role of excitation distribution in the intrinsic resolution**

A. Vasilyev<sup>1</sup>, A. Gektin<sup>2</sup>

<sup>1</sup>Skobel'syn Institute of Nuclear Physics, Lomonosov Moscow State University (RU), <sup>2</sup>Institute for Scintillation Materials, NAS (UA)

**14:45 On the impact of the nano-scale fluctuations of electronic structure in solid solutions on the scintillating properties**

S. Gridin<sup>1</sup>, A. Belsky<sup>2</sup>, A. Gektin<sup>3</sup>, A. Vasiliev<sup>4</sup>

<sup>1</sup>Wake Forest University (US), <sup>2</sup>University Lyon1, CNRS (FR), <sup>3</sup>Institute for Scintillation Materials, NAS (UA), <sup>4</sup>Skobel'syn Institute of Nuclear Physics, Lomonosov Moscow State University,

**15:00 Can self-trapped excitons deliver energy to impurities in tungstates?**

V. Nagirnyi<sup>1</sup>, D. Spassky<sup>2</sup>, I. Romet<sup>1</sup>, E. Aleksanyan<sup>3</sup>, M. Kirm<sup>1</sup>

<sup>1</sup>Institute of Physics, University of Tartu (EE), <sup>2</sup>Skobel'syn Institute of Nuclear Physics, Lomonosov Moscow State University (RU), <sup>3</sup>A. Alikhanyan National Science Laboratory (AM)

**15:15 A Theoretical First-principles Investigation of the Properties of Self-Trapped Excitons and Defects in Halide Scintillators**

A. Canning<sup>1</sup>, M. Del Ben<sup>1</sup>, E. Bourret<sup>1</sup>, G. Bizarri<sup>1</sup>

<sup>1</sup>Lawrence Berkeley National Laboratory (US)

**15:30 The electronic structure of Tl, Pb, and Bi based scintillators and how that relates to scintillator performance**

P. Dorenbos<sup>1</sup>, R. Awater<sup>1</sup>

<sup>1</sup>Delft University of Technology (NL)

**15:45 Picosecond absorption spectroscopy of self-trapped holes, self-trapped excitons, and transient Ce states in LaBr<sub>3</sub> and LaBr<sub>3</sub>:Ce**

P. Li<sup>1</sup>, S. Gridin<sup>1</sup>, K. Ucer<sup>1</sup>, R. Williams<sup>1</sup>, K. Yang<sup>2</sup>, P. Menge<sup>2</sup>

<sup>1</sup>Wake Forest University (US), <sup>2</sup>Saint-Gobain Crystals (US)

**Coffee** Tuesday 16:00-16:30

**Characterization #1** Tuesday 16:30-18:15

Session Chair: Pieter Dorenbos

**16:30 High Performance CLYC-PVT Composite Scintillators for Neutron/Gamma Detection**

S. Lam<sup>1</sup>, J. Fiala<sup>1</sup>, S. Motakef<sup>1</sup>

<sup>1</sup>CapeSym, Inc. (US)

**16:45 Scintillation properties of pure YAG crystals**

N. Shiran<sup>1</sup>, A. Gektin<sup>1</sup>, V. Nesterkina<sup>1</sup>, S. Vasyukov<sup>1</sup>, O. Zelenskaya<sup>1</sup>

<sup>1</sup>Institute for Scintillation Materials, NAS (UA)

**17:00 Comprehensive study on La-GPS scintillator**

S. Kurosawa<sup>1</sup>, T. Horiai<sup>1</sup>, R. Murakami<sup>2</sup>, Y. Shoji<sup>2</sup>, A. Yamaji<sup>3</sup>, S. Kodama<sup>1</sup>, Y. Ohashi<sup>3</sup>, Y. Yokota<sup>3</sup>, K. Kamada<sup>1,2,4</sup>, A. Yoshikawa<sup>1,2,4</sup>, A. Ohnishi<sup>5</sup>, M. Kitaura<sup>5</sup>

<sup>1</sup>Tohoku University (JP), <sup>2</sup>C&A Corp. (JP), <sup>3</sup>Institute for Materials Research, Tohoku University (JP), <sup>4</sup>NICHE, Tohoku University (JP), <sup>5</sup>Yamagata University, Department of Physics (JP)

**17:15 Li-Be-Si-Ce scintillation glass and glass ceramics with moderate properties**

M. Korjik<sup>1,2</sup>, A. Fedorov<sup>1,2</sup>, A. Dosovitskiy<sup>3</sup>, O. Akimova<sup>1</sup>, E. Gordienko<sup>2</sup>, G. Dosovitskiy<sup>2</sup>, V. Mechinsky<sup>1,2</sup>

<sup>1</sup>Institute for Nuclear Problems, BSU (BY), <sup>2</sup>NRC Kurchatov Institute - IREA, Moscow (RU), <sup>3</sup>NeoChem JSC (RU)

**17:30 Study of the glass and glass ceramic BaO<sub>2</sub>(SiO<sub>2</sub>):Ce (DSB: Ce) scintillation material for high energy physics application**

V. Dormenev<sup>1</sup>, A. Borisevich<sup>2</sup>, K.T. Brinkmann<sup>1</sup>, D. Kozlov<sup>3</sup>, M. Korjik<sup>2,4</sup>, R. Novotny<sup>1</sup>, P. Orsich<sup>2</sup>, H.G. Zaunick<sup>1</sup>

<sup>1</sup>Justus Liebig University Giessen (DE), <sup>2</sup>Institute for Nuclear Problems, BSU (BY), <sup>3</sup>Research Institute for Nuclear Problems, Minsk, Belarus, <sup>4</sup>NRC Kurchatov Institute - IREA, Moscow (RU)

**17:45 Radiation hardness of Rare Earth doped sol-gel silica fibers for High Energy Physics Detectors**

F. Cova<sup>1</sup>, N. Chiodini<sup>2</sup>, M. Fasoli<sup>2</sup>, F. Moretti<sup>2</sup>, K. Pauwels<sup>1</sup>, E. Auffray<sup>3</sup>, M. Lucchini<sup>3</sup>, G. Bizarri<sup>4</sup>, E. Bourret<sup>4</sup>, S. Baccaro<sup>5,6</sup>, A. Cemmi<sup>6</sup>, A. Vedda<sup>2</sup>

<sup>1</sup>Universita & INFN, Milano-Bicocca (IT), <sup>2</sup>University of Milano-Bicocca (IT), <sup>3</sup>CERN (CH), <sup>4</sup>Lawrence Berkeley National Laboratory (US), <sup>5</sup>INFN Sezione di Roma (IT), <sup>6</sup>ENEA (IT)

IAC Meeting [restricted]

Tuesday 19:00-22:00

[Meeting restricted to the International Advisory Committee]

Registration

Wednesday 08:00-08:30

Nanomaterials

Wednesday 08:30-10:00

Session Chair: Christophe Dujardin

**08:30 Colloidal quantum dots design for scintillation applications**

B. Mahler<sup>1</sup>, J. Baronnier<sup>2</sup>, J. Houel<sup>2</sup>, C. Dujardin<sup>2</sup>

<sup>1</sup>CNRS (FR), <sup>2</sup>Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR)

**09:00 Radiation synthesis of highly luminescent nanoscintillators with fast decay**

V. Čuba<sup>1</sup>, L. Procházková<sup>1</sup>, J. Barta<sup>2</sup>, E. Mihokova<sup>3</sup>, M. Niki<sup>3</sup>

<sup>1</sup>Czech Technical University in Prague (CZ), <sup>2</sup>Acad. of Sciences of the Czech Rep. (CZ), <sup>3</sup>Institute of Physics of the Czech Academy of Sciences (CZ)

**09:15 Spectroscopic Properties of Scintillating Hafnium Dioxide Nanocrystals**

I. Villa<sup>1</sup>, A. Lauria<sup>2</sup>, F. Moretti<sup>1</sup>, M. Fasoli<sup>1</sup>, C. Dujardin<sup>3</sup>, M. Niederberger<sup>2</sup>, A. Vedda<sup>1</sup>

<sup>1</sup>Department of Materials Science, University of Milano-Bicocca (IT), <sup>2</sup>Laboratory for Multifunctional Materials, ETH Zürich (CH), <sup>3</sup>Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR)

**09:30 Purcell-Enhanced scintillating properties in metal:ZnO nanostructures**

A. Chen<sup>1</sup>, L. Ying<sup>2</sup>, Z. Yu<sup>2</sup>, R. Zhu<sup>3</sup>, Z. Wang<sup>1</sup>

<sup>1</sup>Los Alamos National Laboratory (US), <sup>2</sup>University of Wisconsin-Madison (US), <sup>3</sup>California Institute of Technology (US)

**09:45 X-ray excited luminescence of Ga-doped ZnO nanorod arrays with hydrogen treatment**

Q. Li<sup>1</sup>, X. Liu<sup>1</sup>, M. Gu<sup>1</sup>, J. Zhang<sup>1</sup>, S. Huang, S. Liu<sup>1</sup>, Q. Wu, Y. Hu

<sup>1</sup>Tongji University (CN)

Poster Session #2 / Coffee

Wednesday 10:00-11:00

Session Chair: Rémi Chipaux, Kristof Pauwels, Marco Pizzichemi

[Posters of this session are listed on page 25]

Session Chair: Martin Nikl

**11:00 First step towards the design of metamaterials combining dense scintillator host with nanocrystals**

R. Martinez Turtos<sup>1</sup>, S. Gundacker<sup>2</sup>, J. Grim<sup>3</sup>, A. Polovitsyn<sup>4</sup>, I. Moreels<sup>4</sup>, E. Auffray<sup>1</sup>, P. Lecoq<sup>1</sup>

<sup>1</sup>CERN (CH), <sup>2</sup>Universita & INFN, Milano-Bicocca (IT), <sup>3</sup>U.S. Naval Research Laboratory (US), <sup>4</sup>Istituto Italiano di Tecnologia (IT)

**11:15 Perspectives On The Future Developments of Nano Scintillators**

S. Saramad<sup>1</sup>

<sup>1</sup>Amirkabir University of Technology (IR)

**11:30 Fast timing capabilities of the hybrid GRIFFIN array**

B. Olaizola Mampaso<sup>1</sup>, A. Garnsworthy<sup>1</sup>, C. Svensson<sup>2</sup>, P. Garrett<sup>2</sup> on behalf of the GRIFFIN collaboration

<sup>1</sup>TRIUMF (CA), <sup>2</sup>University of Guelph (CA)

**11:45 Comparing BSO and BGO with different surface finishes as cost-effective, hybrid scintillation/Cherenkov detectors for TOF-PET**

S. Brunner<sup>1</sup>, D. Schaart<sup>1</sup>

<sup>1</sup>Delft University of Technology (NL)

**12:00 Light spread manipulation in scintillators using Laser Induced Optical Barriers**

L. Bläckberg<sup>1,2</sup>, G. El Fakhri<sup>1</sup>, H. Sabet<sup>1</sup>

<sup>1</sup>Gordon Center for Medical Imaging & Harvard Medical School (US), <sup>2</sup>Department of Physics and Astronomy, Uppsala University (SE)

**12:15 Photonic crystals slabs applied to inorganic scintillators**

M. Salomoni<sup>1,2</sup>, R. Pots<sup>1,3</sup>, P. Lecoq<sup>1</sup>, E. Auffray<sup>1</sup>, M. Paganoni<sup>2</sup>, S. Gundacker<sup>2</sup>, M. Pizzichemi<sup>1</sup>, M. Marshall<sup>4</sup>, S. Waterman<sup>4</sup>, B. Singh<sup>4</sup>, V. Navakar<sup>4</sup>

<sup>1</sup>CERN (CH), <sup>2</sup>Universita & INFN, Milano-Bicocca (IT), <sup>3</sup>RWTH Aachen (DE), <sup>4</sup>Radiation Monitoring Devices, Inc. (US)

Session Chair: Andrey Vasiliev

**08:30 Free carrier absorption for study of fast excitation transfer in scintillation crystals**

G. Tamulaitis<sup>1</sup>, S. Nargelas<sup>1</sup>, A. Vaitkevicius<sup>1</sup>, M. Korjik<sup>2,3</sup>, M. Lucchini<sup>4</sup>, E. Auffray<sup>4</sup>

<sup>1</sup>Vilnius University (LT), <sup>2</sup>Institute for Nuclear Problems, BSU (BY), <sup>3</sup>NRC Kurchatov Institute - IREA, Moscow (RU), <sup>4</sup>CERN (CH)

**08:45 Some trends in the yield of the hot intraband luminescence**

S. Omelkov<sup>1</sup>, V. Nagirnyi<sup>1</sup>, M. Kirm<sup>2</sup>

<sup>1</sup>Institute of Physics, University of Tartu (EE), <sup>2</sup>University of Tartu (EE)

**09:00 Two-photon photoconductivity and luminescence in scintillators – measurement and mapping**

D. Onken<sup>1</sup>, S. Gridin<sup>1</sup>, K. Ucer<sup>1</sup>, R. Williams<sup>1</sup>

<sup>1</sup>Wake Forest University (US)

**09:15 Charge trapping processes and energy transfer in PbMoO<sub>4</sub> studied by electron paramagnetic resonance and thermally stimulated luminescence**

M. Buryi<sup>1</sup>, V. Laguta<sup>1</sup>, M. Fasoli<sup>2</sup>, F. Moretti<sup>2</sup>, M. Trubitsyn<sup>3</sup>, M. Volnianskii<sup>3</sup>, A. Vedda<sup>2</sup>, M. Nikl<sup>1</sup>

<sup>1</sup>Institute of Physics of the Czech Academy of Sciences (CZ), <sup>2</sup>University of Milano-Bicocca (IT), <sup>3</sup>Oles Honchar Dnipropetrovsk National University (UA)

**09:30 Pulse shape analysis of individual gamma events - correlation to resolution and the possibility of its improvement**

V. Gayshan<sup>1</sup>, A. Gektin<sup>2</sup>, S. Vasyukov<sup>2</sup>, S. Gridin<sup>3</sup>, D. Onken<sup>3</sup>, R. Williams<sup>3</sup>

<sup>1</sup>ScintiTech Inc. (US), <sup>2</sup>Institute for Scintillation Materials, NAS (UA), <sup>3</sup>Wake Forest University (US)

**09:45 Excitation density distribution effects on fast ZnO excitonic emission**

P. Martin<sup>1</sup>, A. Belsky<sup>2</sup>, A. Vasilyev<sup>3</sup>, N. Fedorov<sup>4</sup>, M. Dumergue<sup>5</sup>

<sup>1</sup>CNRS-CELIA (FR), <sup>2</sup>University Lyon1, CNRS (FR), <sup>3</sup>Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University (RU), <sup>4</sup>Univ. Bordeaux-CELIA (FR), <sup>5</sup>ELI-ALPS, ELI-Hu (HU)

Session Chair: Rémi Chipaux, Kristof Pauwels, Marco Pizzichemi

[Posters of this session are listed on page 29]

Session Chair: William Moses

**11:00 Precise rise time measurements of inorganic scintillators using X-ray and 511 keV excitation**

S. Gundacker<sup>1</sup>, R. Martinez Turtos<sup>2</sup>, E. Auffray<sup>2</sup>, P. Lecoq<sup>2</sup>

<sup>1</sup>Universita & INFN, Milano-Bicocca (IT), <sup>2</sup>CERN (CH)

**11:15 Significant improvement of GAGG based scintillation detector performance by control of the electronic excitation dynamics**

M. Korjik<sup>1,2</sup>, V. Alenkov<sup>3</sup>, A. Borisevich<sup>1</sup>, K.T. Brinkmann<sup>4</sup>, O. Buzanov<sup>3</sup>, V. Dormenev<sup>4</sup>, G. Dosovitskiy<sup>5</sup>, A. Dosovitskiy<sup>6</sup>, A. Fedorov<sup>1</sup>, D. Kozlov<sup>1</sup>, R. Novotny<sup>4</sup>, G. Tamulaitis<sup>7</sup>, V. Vasiliev<sup>3</sup>, H.G. Zaunick<sup>4</sup>

<sup>1</sup>Institute for Nuclear Problems, BSU (BY), <sup>2</sup>NRC Kurchatov Institute - IREA, Moscow (RU), <sup>3</sup>FOMOS Crystals (RU), <sup>4</sup>Justus Liebig University Giessen (DE), <sup>5</sup>Institute of Chemical Reagents and High Purity Chemical Substances (RU), <sup>6</sup>NeoChem JSC (RU), <sup>7</sup>Vilnius University (LT)

**11:30 Timing performance of GAGG:Ce and LuAG:Ce epitaxial garnet films co-doped by divalent Mg<sup>2+</sup> ions**

M. Kucera<sup>1</sup>, Z. Lucenicova<sup>1</sup>, O. Lalinsky<sup>2</sup>, M. Nikl<sup>3</sup>, C. Dujardin<sup>4</sup>, M. Hanus<sup>1</sup>

<sup>1</sup>Charles University (CZ), <sup>2</sup>Institute of Scientific Instruments of the Czech Academy of Sciences (CZ), <sup>3</sup>Institute of Physics of the Czech Academy of Sciences (CZ), <sup>4</sup>Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR)

**11:45 Scintillation properties of LuAG-based scintillators: Influence of Ga-admixture, non-stoichiometry and Mg-codoping**

J. Pejchal<sup>1</sup>, V. Babin<sup>1</sup>, A. Beitlerova<sup>1</sup>, R. Kucerkova<sup>1</sup>, P. Prusa<sup>2</sup>, D. Pánek<sup>3</sup>, T. Parkman<sup>3</sup>, K. Kamada<sup>4</sup>, A. Yoshikawa<sup>4</sup>

<sup>1</sup>Institute of Physics of the Czech Academy of Sciences (CZ), <sup>2</sup>Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering (CZ), <sup>3</sup>Czech Technical University in Prague, Faculty of Biomedical Engineering (CZ), <sup>4</sup>NICHE, Tohoku University, C&A Corp. (JP)

**12:00 Consequences of Ca co-doping in YAIO<sub>3</sub>:Ce single crystals**

F. Moretti<sup>1,2</sup>, K. Hovhannesian<sup>3</sup>, M. Derdzian<sup>3</sup>, G. Bizarri<sup>4</sup>, E. Bourret<sup>4</sup>, A. Petrosyan<sup>3</sup>, C. Dujardin<sup>1</sup>

<sup>1</sup>Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR),

<sup>2</sup>Department of Materials Science, University of Milano-Bicocca (IT),

<sup>3</sup>Institute for Physical Research, National Academy of Sciences (AM),

<sup>4</sup>Lawrence Berkeley National Laboratory (US)

**12:15 Pulse shape studies of various scintillators with waveform digitizing techniques**

W. Wolszczak<sup>1</sup>, P. Dorenbos<sup>1</sup>

<sup>1</sup>Delft University of Technology (NL)

Session Chair: Karl Ziemons

**14:30 Scintillator materials and phenomena studied for fast timing**

M. Nikl<sup>1</sup>

<sup>1</sup>Institute of Physics of the Czech Academy of Sciences (CZ)

**15:00 From Academic Research to Scintillator Crystal Industry**

B. Chai<sup>1</sup>

<sup>1</sup>Crystal Photonics, Inc. (US)

**15:30 Industrial Scale R&D of Fast Scintillators**

J. Houzvicka<sup>1</sup>, S. Sykorova<sup>1</sup>, M. Nikl<sup>2</sup>

<sup>1</sup>CRYTUR Ltd. (CZ), <sup>2</sup>Institute of Physics of the Czech Academy of Sciences (CZ)

**15:45 Fomos-Materials experience to control crystal properties**

O. Buzanov<sup>1</sup>, V. Alenkov<sup>1</sup>

<sup>1</sup>FOMOS Crystals (RU)

**16:00 C&A**

K. Kamada<sup>1</sup>

<sup>1</sup>C&A Corp. (JP)

**16:15 Scionix**

P. Schotanus<sup>1</sup>

<sup>1</sup>Scionix (NL)



**16:30 Scintacor**  
C. DeStefanis<sup>1</sup>  
<sup>1</sup>*Scintacor (UK)*

**16:45 Saint-Gobain**  
V. Ouspenski<sup>1</sup>  
<sup>1</sup>*Saint-Gobain Recherche (FR)*

Coffee Thursday 17:00-17:30

Industrial Event: Round Table Thursday 17:30-18:30

Session Chair: Karl Ziemons // COST ACTION TD1401 [FAST]

Conference Banquet Thursday 19:30-00:00

Registration Friday 08:00-08:30

Crystal Growth #2 Friday 08:30-10:00

Session Chair: Edith Bourret

**08:30 Ultra radio-pure scintillators for Rare Events Physics**

I. Dafinei<sup>1</sup>  
<sup>1</sup>*INFN Sezione di Roma (IT)*

**08:45 Epitaxial Growth of Ce-doped (Pb,Gd)<sub>3</sub>(Al,Ga)<sub>5</sub>O<sub>12</sub> Films and Their Optical, Photoluminescence and Scintillation Properties**

D. Vasil'ev<sup>1</sup>, S. Kurosawa<sup>2</sup>, D. Spassky<sup>3</sup>, S. Omelkov<sup>4</sup>, N. Vasil'eva<sup>1</sup>, V. Plotnichenko<sup>5</sup>, A. Khakhalin<sup>6</sup>, V. Kochurikhin<sup>1</sup>

<sup>1</sup>*Prokhorov General Physics Institute, Russian Academy of Sciences (RU)*, <sup>2</sup>*NICHe, Tohoku University (JP)*, <sup>3</sup>*Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University (RU)*, <sup>4</sup>*Institute of Physics, University of Tartu (EE)*, <sup>5</sup>*Fiber Optics Research Center, Russian Academy of Sciences (RU)*, <sup>6</sup>*Lomonosov Moscow State University, Physics Department (RU)*

**09:00 Scintillation Properties of La<sub>2</sub>Hf<sub>2</sub>O<sub>7</sub> Transparent Ceramics by the Spark Plasm Sintering Method**

S. Kurosawa<sup>1</sup>, K. Harata<sup>1</sup>, S. Kodama<sup>1</sup>, S. Yamato<sup>1</sup>, A. Yamaji<sup>2</sup>, J. Pejchal<sup>3</sup>, Y. Ohashi<sup>2</sup>, K. Kamada<sup>4</sup>, Y. Yokota<sup>2</sup>, A. Yoshikawa<sup>4</sup>

<sup>1</sup>*Tohoku University (JP)*, <sup>2</sup>*Institute for Materials Research, Tohoku University (JP)*, <sup>3</sup>*Institute of Physics of the Czech Academy of Sciences (CZ)*, <sup>4</sup>*NICHe, Tohoku University, C&A Corp. (JP)*

**09:15 Comparative study of rare-earth aluminate scintillation crystals fabricated under different conditions**

O. Sidletskiy<sup>1</sup>  
<sup>1</sup>*Institute for Scintillation Materials, NAS (UA)*

**09:30 Shaped crystal growth of novel oxide scintillators by the edge defined film fed growth method**

K. Kamada<sup>1</sup>, T. Kotaki<sup>2</sup>, M. Miyazaki<sup>2</sup>, Y. Shoji<sup>3</sup>, A. Yamaji<sup>3</sup>, S. Kurosawa<sup>3</sup>, Y. Yokota<sup>4</sup>, Y. Ohashi<sup>5</sup>, A. Yoshikawa<sup>1</sup>

<sup>1</sup>*NICHe, Tohoku University, C&A Corp. (JP)*, <sup>2</sup>*Namiki Precision Jewel Co., Ltd. (JP)*, <sup>3</sup>*Tohoku University (JP)*, <sup>4</sup>*NICHe, Tohoku University (JP)*, <sup>5</sup>*Institute for Materials Research, Tohoku University (JP)*

**09:45 Growth of Ce-doped garnets with additional monovalent impurities and related effects**

A. Petrosyan<sup>1</sup>, M. Derdzian<sup>1</sup>, K. Hovhannesian<sup>1</sup>, R. Sargsyan<sup>1</sup>, A. Novikov<sup>1</sup>, A. Eganyan<sup>1</sup>, C. Dujardin<sup>2</sup>

<sup>1</sup>*Institute for Physical Research, National Academy of Sciences (AM)*,

<sup>2</sup>*Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR)*

Coffee Friday 10:00-10:30

Applications #3 Friday 10:30-12:15

Session Chair: Christian Morel

**10:30 Light Yield Enhancement of the 157-Gadolinium Oxysulfide Scintillator Screens for the High-resolution Neutron Imaging**

J. Crha<sup>1</sup>, J. Vila-Comamala<sup>2</sup>, E. Lehmann<sup>3</sup>, C. David<sup>3</sup>, P. Trtik<sup>3</sup>

<sup>1</sup>*Czech Technical University in Prague (CZ)*, <sup>2</sup>*University and ETH Zürich (CH)*, <sup>3</sup>*Paul Scherrer Institut (CH)*

**10:45 Ultrafast Scintillator for Dynamic Compression Studies**

Z. Marton<sup>1</sup>, N. Sinclair<sup>2</sup>, Y. Gupta<sup>3</sup>, B. Singh<sup>1</sup>, V. Nagarkar<sup>1</sup>

<sup>1</sup>*Radiation Monitoring Devices, Inc. (US)*, <sup>2</sup>*Washington State University, The Dynamic Compression Sector (US)*, <sup>3</sup>*Washington State University (US)*

**11:00 Optimization of micro columnar CsI:TI scintillators for X-ray medical imaging applications**

M. Dorel<sup>1</sup>, M. Beranger<sup>1</sup>, A. Clouet<sup>1</sup>

<sup>1</sup>*TRIXELL (FR)*

**11:15 Miniature inorganic scintillation detectors for on-line treatment verification during brachytherapy**

G. Kertzscher<sup>1</sup>, S. Beddar<sup>1</sup>

<sup>1</sup>*The University of Texas, MD Anderson Cancer Center (US)*

**11:30 Real-time 3D scintillation dosimetry using organic liquid scintillators for proton therapy**

S. Beddar<sup>1</sup>

<sup>1</sup>*The University of Texas, MD Anderson Cancer Center (US)*

**11:45 Scintillating fibers devices for Particle Therapy applications**

G. Battistoni<sup>1</sup>, F. Collamati<sup>2</sup>, E. De Lucia<sup>3</sup>, R. Faccini<sup>2,4</sup>, V. Giacometti<sup>2,5</sup>, C. Mancini Terracciano<sup>2,4</sup>, M. Marafini<sup>2,5</sup>, I. Mattei<sup>1</sup>, R. Mirabelli<sup>2,4</sup>, S. Muraro<sup>6</sup>, V. Patera<sup>2,4,5</sup>, D. Pinci<sup>2</sup>, A. Sarti<sup>3,4,5</sup>, A. Sciubba<sup>2,4,5</sup>, E. Solfaroli Camillocci<sup>4</sup>, M. Toppi<sup>3</sup>, G. Traini<sup>2,4</sup>, S. Valle<sup>1,7</sup>, C. Voena<sup>2</sup>

<sup>1</sup>*INFN Sezione di Milano (IT)*, <sup>2</sup>*INFN Sezione di Roma (IT)*, <sup>3</sup>*INFN Sezione di Frascati (IT)*, <sup>4</sup>*Sapienza Università di Roma (IT)*, <sup>5</sup>*Centro Fermi, Roma (IT)*, <sup>6</sup>*INFN Sezione di Pisa (IT)*, <sup>7</sup>*Università degli Studi di Milano (IT)*

**12:00 Development of a high resolution module for PET scanners with DOI capabilities**

A. Polese<sup>1,2</sup>, G. Stringhini<sup>1,2</sup>, M. Pizzichemi<sup>2</sup>, T. Niknejad<sup>3</sup>, S. Tavernier<sup>3</sup>, M. Paganoni<sup>1</sup>, E. Auffray<sup>2</sup>

<sup>1</sup>*Università & INFN, Milano-Bicocca (IT)*, <sup>2</sup>*CERN (CH)*, <sup>3</sup>*LIP (PT)*

Conference Closing Friday 12:15-13:00

Session Chair: Etienne Auffray

**12:15 Conference Summary**

C. Dujardin<sup>1</sup>

<sup>1</sup>*Institut Lumière Matière, UMR5306 Université Lyon1-CNRS (FR)*

**12:35 SCINT Conference site in 2019**

**12:45 Conference Closure**

E. Auffray<sup>1</sup>

<sup>1</sup>*CERN (CH)*

Session Chair: Rémi Chipaux, Kristof Pauwels, Marco Pizzichemi

- P1-01 A scintillator detector for beam tuning of low energy single electron accelerator**  
Y. Xie, *Institute of High Energy Physics (CN)*
- P1-02 Application of a LaBr<sub>3</sub>(Ce) Scintillation Detector to an Environmental Radiation Monitor**  
Y.Y. Ji, *Korea Atomic Energy Research Institute (KR)*
- P1-03 Coincidence Resolution Time Measurements of LaBr<sub>3</sub> (Ce) Detectors with a Fully Digital Acquisition System.**  
V. Sánchez-tembleque, *Grupo de Física Nuclear (ES)*
- P1-04 Scintillators in high-power laser driven experiments**  
M. Tarisien, *CNRS-IN2P3 (FR)*
- P1-05 Fast scintillation X-ray detector using proportional-mode Si-APD and a HfO<sub>2</sub>-nanoparticle-doped plastic scintillator**  
S. Kishimoto, *KEK (JP)*
- P1-06 Development of SiPM based Scintillation Detector for Energy Selective X-ray Imaging**  
C. Park, *Yonsei University (KR)*
- P1-07 Ti<sub>2</sub>GdCl<sub>5</sub> (Ce<sup>3+</sup>): A new efficient scintillator for X- and  $\gamma$ -rays detection**  
G. Rooh, *Abdul Wali Khan University (PK)*
- P1-08 Characterizing some detection properties of Zinc Oxide nanowires in Anodic Aluminium Oxide membrane, as a novel high spatial resolution X-ray imager**  
F. Esfandi, *Amirkabir University of Technology (IR)*
- P1-09 High resolution Thick ZnO Nanowires in AAO Template for Hard X-Ray Imaging Applications**  
H. Zarei, *Energy Engineering and Physics Department, Amirkabir University of Technology, Hafez Ave., Tehran, Iran*
- P1-10 Li<sub>2</sub>Se(Ag) A New Neutron Sensitive Scintillator**  
R. Riedel, *Oak Ridge National Laboratory (US)*
- P1-11 Evaluation of ZnS/6LiF and ZnO/6LiF scintillation neutron detectors read out with SiPMs**  
M. Hildebrandt, *Paul Scherrer Institut (CH)*

- P1-12 Neutron detection using Li-loaded scintillators coupled to a custom-designed silicon photomultiplier array**  
F. Liang, *FLIR Systems Inc. (US)*
- P1-13 Novel scintillator screens for fast neutron detection with improved efficiency and spatial resolution**  
B. Walfort, *RC Tritec AG (CH)*
- P1-14 Scintillation powders for neutron detection**  
L. Fišerová, *University of Defence (CZ)*
- P1-15 Newly developed flexible thermal neutrons detectors containing 6LiF nanocrystals**  
M. Vesco, *LNF-INFN (IT)*
- P1-16 Characterization of liquid scintillation detector BC501A**  
S. Rawat, *Indian Institute of Technology, Roorkee*
- P1-17 Lithium di-silicate Li<sub>2</sub>O<sub>2</sub>SiO<sub>2</sub>:Tb bright scintillation glass for thermal neutron detection**  
Y. Tratsiak, *Institute for Nuclear Problems, BSU (BY)*
- P1-18 A study of <sup>40</sup>Ca<sup>100</sup>MoO<sub>4</sub> scintillation crystals for the AMoRE-I experiment**  
J. Lee, *Kyungpook National University (KR)*
- P1-19 Phonon-scintillation properties of molybdate crystals for neutrino-less double beta decay experiment**  
H. Kim, *Institute of Basic Science (KR), Kyungpook National University (KR)*
- P1-20 Particle discrimination with low-temperature detectors based on CaMoO<sub>4</sub> scintillating crystals**  
H.S. Jo, *Institute of Basic Science (KR)*
- P1-21 Pre-production and quality assurance of the Mu2e crystals**  
R. Zhu, *California Institute of Technology (US)*
- P1-22 Pre-production and quality assurance of the Mu2e Silicon Photomultipliers**  
S. Miscetti, *LNF-INFN (IT)*
- P1-23 A scintillator based charged particle veto system for the PADME experiment**  
G. Georgiev, *University of Sofia (BG)*

- P1-24 Pulse Shape Discrimination with CsI(Tl) to Improve Hadron Particle Identification at High Energy Physics Experiments**  
S. Longo, *University of Victoria (CA)*
- P1-25 PANDA Barrel Time-of-Flight Detector**  
K. Suzuki, *Stefan Meyer Institute, Austrian Academy of Sciences (AT)*
- P1-26 Radiation Damage of CMS HCAL Scintillator/WLS fiber read-out during Run1 and Run2**  
P. De Barbaro, *University of Rochester (US)*
- P1-27 The CMS ECAL Upgrade for Precision Crystal Calorimetry at the HL-LHC**  
A. Jofrehei, *Institute for Research in Fundamental Sciences (IR)*
- P1-28 High Dynamic Range Front-End Circuit for SiPM-Based Read-out of Large LaBr<sub>3</sub> Crystals**  
G. Montaganani, *Politecnico di Milano, INFN (IT)*
- P1-29 Characterization of Cs<sub>2</sub>LiLaBr<sub>6</sub>:Ce (CLLB) Scintillator with Silicon Photomultiplier Arrays**  
A. Tuff, *Kromek Ltd. (UK)*
- P1-30 Development of SiPM-based X-ray counting scintillation detector for security applications**  
D. Philippov, *National Research Nuclear University MEPhI (RU)*
- P1-31 Investigation on electron beam radiation defects induced in KETEK PM3350 silicon photomultipliers**  
A. Stancalie, *National Institute for Laser Plasma and Radiation Physics, Center for Advanced Laser Technologies*
- P1-32 Implementation of an analytical model of SiPM in GATE**  
M. Dupont, *Aix-Marseille University and CNRS/IN2P3 (FR)*
- P1-33 Measurements of Position and Depth of Interaction using Silicon PhotoStrip Sensors with a CsI(Tl) Crystal Scintillator**  
H. Jeon, *Kyungpook National University (KR)*
- P1-34 Design of the fast radiation detector with 10-picosecond time resolution based on crossluminescence scintillator**  
I. Kamenskikh, *Lomonosov Moscow State University (RU)*
- P1-35 Ionization Quenching Correction of Volumetric Organic Scintillators for use in Proton Therapy**  
F. Alsanea, *The University of Texas, MD Anderson Cancer Center (US)*
- P1-36 Development of High Spatial Resolution Dosimeter for Medical Uses by Colorimetric Discrimination Method**  
C. Shim, *SungKyunKwan University (KR)*
- P1-37 Scintillation materials for PET/MRI coupled to digital SiPM**  
B. Seitz, *University of Glasgow (UK)*
- P1-38 Development and Evaluation of PET-Compton imager based on Ce:Gd<sub>3</sub>Ga<sub>2.7</sub>Al<sub>2.3</sub>O<sub>12</sub> and CeBr<sub>3</sub> scintillators with SiPM arrays**  
K. Shimazoe, *Tohoku University (JP)*
- P1-39 Development of a SiPM based DOI-PET detector module using depth-dependent reflector pattern within a single layer scintillator**  
H. Song, *Yonsei University (KR)*
- P1-40 Development of a detector module suitable for Whole body PET with improved timing performance**  
T. Niknejad, *LIP (PT)*
- P1-41 Temporal Imaging for PET: Coincidence Timing results on 20 mm LYSO crystals**  
M. Hmissi, *Université de Technologie de Troyes (FR)*
- P1-42 Breast-dedicated PET system with a personalized gantry**  
I. Kang, *Yonsei University (KR)*

Session Chair: Rémi Chipaux, Kristof Pauwels, Marco Pizzichemi

- P2-01 Photoelastic sphenoscopic observations for reliable and fast inspection of anisotropic crystals**  
P. Natali, *Universita Politecnica delle Marche (IT)*
- P2-02 Vacuum Ultraviolet Luminescence Spectroscopy Setup at Max IV Laboratory**  
V. Pankratov, *Max IV Laboratory, Lund University (SE)*
- P2-03 Enhanced emission of plastic scintillators by plasmonic lattice resonance**  
B. Liu, *Tongji University (CN)*
- P2-04 Silica coating of scintillating nanoparticles**  
K. Tomanová, *Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering (CZ)*
- P2-05 Composite scintillators with improved light yield, temporal and spatial resolutions**  
A. Pokidov, *ISSP RAS (RU)*
- P2-06 Impact of wrapping materials and bonding adhesives on light transfer efficiency (LTE) and light transfer time spread (LTTS) in scintillation detectors**  
F. Loignon-Houle, *Université de Sherbrooke (CA)*
- P2-07 Improvement of light extraction from scintillators due to the surface modification in microscale using Xe-PFIB**  
P. Modrzyński, *Nanores (PL)*
- P2-08 Facile Synthesis of High Purity Anhydrous Complex Rare Earth Halides by the Modified Mixed-Salts-Dehydration Method**  
J. Yu, *National Engineering Research Center for Rare Earth Materials (CN)*
- P2-09 Growth and Scintillation properties of Cs<sub>2</sub>LiYCl<sub>6</sub> crystals doped with different Ce<sup>3+</sup> concentration**  
G. Ren, *Shanghai Institute of Ceramics, Chinese Academy of Sciences (CN)*
- P2-10 Photo-induced preparation of band-gap-engineered garnet powders**  
J. Bárta, *Czech Technical University, Acad. of Sciences (CZ)*

- P2-11 Optical band gap engineering of chemically synthesized PbS thin films by in situ Sn doping for photovoltaic application**  
F. Hone, *University of the Free State (ZA)*
- P2-12 LuAG:Pr<sup>3+</sup> - BASED NANOHYBRID SYSTEMS FOR SINGLET OXYGEN GENERATION**  
K. Popovich, *Czech Technical University in Prague, Faculty of Nuclear Sciences and Physical Engineering (CZ)*
- P2-13 Scintillation characteristics of liquid phase epitaxy grown GAGG:Ce single crystalline films**  
W. Chewpraditkul, *King Mongkut's University of Technology Thonburi (TH)*
- P2-14 Directionally Solidified Eu<sup>3+</sup> and Y<sup>3+</sup> Co-Doped HfO<sub>2</sub>/α-Al<sub>2</sub>O<sub>3</sub> Eutectic Scintillators**  
A. Yoshikawa, *IMR, NICHe, Tohoku Univ., C&A Corp. (JP)*
- P2-15 Properties of (Gd<sub>1-x</sub>Lu<sub>x</sub>)<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>:Ce mixing crystal scintillator grown by floating zone method**  
H. Feng, *Shanghai University (CN)*
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