

# Monday, 10 September 2018

09:00 – 09:20 Conference opening  
*Location: Lecture Hall*

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09:20 – 10:50 **Session 1 - RL&SM-ET&S-TSL&OSL I.**

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*Location: Lecture Hall*

09:20 – 09:50 Christophe Dujardin: *Charge effects in semiconductor nanocrystals under ionizing radiation*

09:50 – 10:05 Sergey I. Omelkov: *The influence of band structure on the hot intraband luminescence*

10:05 – 10:20 Gintautas Tamulaitis: *Timing properties of GAGG:Ce and LSO:Ce scintillators with and without codoping*

10:20 – 10:35 Mauro Fasoli: *Optically stimulated luminescence in RE-doped LuAG crystals*

10:35 – 10:50 Vasilii Khanin: *Afterglow curves modeling from TSL measurements for complex garnets*

10:50 – 11:20 Coffee break, Poster I installation

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11:20 – 13:05 **Session 2 – Appl-LM-Dosim I.**

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*Location: Lecture Hall*

11:20 – 11:50 Eduardo Gardenali Yuki-hara: *A Review of Recent Material Developments for Optically Stimulated Luminescence Applications*

11:50 – 12:05 Massimo Piccinini: *Visible photoluminescence of color centers in LiF crystals for advanced diagnostics of 18 – 27 MeV proton beams*

12:05 – 12:20 Lucie Fiserova: *Thermal neutron detection using lanthanide oxybromides*

12:20 – 12:35 Francesca Cova: *Dual response of RE-doped sol-gel silica fibers to high energy electrons*

12:35 – 12:50 Dagmara Kulesza: *Lu<sub>2</sub>O<sub>3</sub>:Tb, M (M=Hf, Ti, Nb) Storage Phosphors: Dose-Response Dependence, Radiation Hardness and Self-Dose Effect*

12:50 – 13:05 Anne-Laure Bulin: *Nanoscintillators to improve radiation therapy outcomes: dose enhancement effect induced in 3D models of glioblastoma upon synchrotron radiation*

13:05 – 14:30 Lunch break, Poster I installation

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14:30 – 16:15 **Session 3 – Novel&Nano**

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*Location: Lecture Hall*

14:30 – 15:00 Václav Čuba: *Inorganic nanoscintillators with ultrafast decay: a comparison and different synthesis strategies*

15:00 – 15:15 Anna Vedda: *The ESQUIRE project: Quantum Dots for scintillation detectors*

15:15 – 15:30 Alice Hospodková: *InGaN/GaN MQW scintillator - design and applications*

15:30 – 15:45 Anatoliy Voloshinovskii: *Nanocomposite polymer scintillator materials*

15:45 – 16:00 Eva Mihóková: *Novel scintillating nanocomposites for X-ray induced photodynamic therapy*

16:00 – 16:15 Fabrizio Davì: *Decay time and residual stress in scintillators: a continuum mechanics approach.*

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16:15 – 18:00 **Poster session I with refreshment (Novel&Nano, Appl-LM-Dosim, RL&SM-ET&S-TSL&OSL)**

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*Location: Poster area*

# Tuesday, 11 September 2018

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09:00 – 10:45 **Session 4 – Def&Perfor**

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*Location: Lecture Hall*

- 09:00 – 09:30 Aleksandr Lushchik: *Radiation-Induced Structural Defects and Their Thermal Annealing in Magnesium Aluminate Spinel*
- 09:30 – 09:45 Sergiu Vasile Nistor: *About the nature and distribution of defects in crystalline cubic boron nitride wide band-gap semiconductor*
- 09:45 – 10:00 Evgeny Radzhabov: *Electron transfer between heterogeneous lanthanides in BaF<sub>2</sub> crystals*
- 10:00 – 10:15 Mariusz Kłosowski: *Spectral analysis of LiF:Mg,Cu,P detectors with different dopants concentration after ultra-high radiation doses*
- 10:15 – 10:30 Serge Nagorny: *Anomalous Quenching Factor for alpha particles in ZnSe crystals – is puzzle solved?*
- 10:30 – 10:45 Alexander Surdo: *Non-radiation creation of complex centers in wide-gap oxide crystals*
- 10:45 – 11:15 Coffee break, removal of Poster I

11:15 – 13:00 **Session 5 – PChLM&Techn**

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*Location: Lecture Hall*

- 11:15 – 11:45 Akira Yoshikawa: *New approach for the growth of scintillator crystals*
- 11:45 – 12:00 Vladimir Ouspenski: *Engineering of Scintillation Materials and complex phases crystals synthesis*
- 12:00 – 12:15 Yuui Yokota: *Scintillation Properties of Eu-doped LiCaAlF<sub>6</sub> and LiSrAlF<sub>6</sub> fluoride single crystals with improved Eu segregation*
- 12:15 – 12:30 Jeppe Brage Christensen: *Applications of amorphous track structure models for correction of ionization quenching in organic scintillators exposed to ion beams*
- 12:30 – 12:45 Shohei Kodama: *Development of red-orange-emitting halide scintillator for single photon counting*

12:45 – 13:00 Zewang Hu: *Fabrication and performance optimization of Pr:Lu<sub>3</sub>Al<sub>5</sub>O<sub>12</sub> ceramic scintillators*

13:00 – 14:30 Lunch break, Poster II installation

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14:30 – 16:15 **Session 6 – Appl-Sci&T-Med-Bi-Env**

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*Location: Lecture Hall*

14:30 – 15:00 Claus E. Andersen: *Latest trends in medical dosimetry using fiber-optic luminescent instrumentation*

15:00 – 15:15 Andrea Polesel: *Development of a PET module with DOI and timing capabilities*

15:15 – 15:30 Shunsuke Kurosawa: *Scintillation Properties of Y-admixed Gd<sub>2</sub>Si<sub>2</sub>O<sub>7</sub> doped with Ce*

15:30 – 15:45 Vítězslav Jarý: *Eu<sup>2+</sup>-doped ARES<sub>2</sub> sulfides – novel multifunctional optical materials*

15:45 – 16:00 Hong Joo Kim: *Luminescence and scintillation characterization of PbMoO<sub>4</sub> scintillation crystal for neutrinoless double beta decay search*

16:00 – 16:15 Georgy Dosovitskiy: *Ceramic scintillators with potential for neutron detection*

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16:15 – 18:00 **Poster session II with refreshment (Appl-Sci&T-Med-Bi-Env, Def&Perfor, PChLM&Techn)**

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*Location: Poster area*

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19:00 – 20:30 **Concert in Bethlehem Chapel**

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*Location: Bethlehem square (Betlemske namesti)*

# Wednesday, 12 September 2018

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09:00	–	10:45	<b>Session 7 – NDET&amp;Instr</b>	
<i>Location: Lecture Hall</i>				
09:00	–	09:30	Etiennette Auffray:	<i>Fast scintillators for high energy physics and medical applications</i>
09:30	–	09:45	Mark Akselrod:	<i>Latest advances in aluminum oxide OSL materials and instrumentation</i>
09:45	–	10:00	Paweł Bilski:	<i>Fluorescent imaging of heavy charged particle tracks with LiF single crystals</i>
10:00	–	10:15	Nicolò Borghi:	<i>Characterization of scintillators and optical components for the ESS Target Imaging System</i>
10:15	–	10:30	Rosalinde Pots:	<i>Improving light collection of scintillating crystals using photonic crystals</i>
10:30	–	10:45	Yuriy Zorenko:	<i>Recent progress in the development of composite scintillators based on the single crystalline films of garnet compounds</i>
10:45	–	11:15	Coffee break	
11:15	–	12:45	<b>Session 8 – RL&amp;SM-ET&amp;S-TSL&amp;OSL II.</b>	
<i>Location: Lecture Hall</i>				
11:15	–	11:45	Andrey Vasil'ev:	<i>Evolution of track structure and its influence on scintillation characteristics: decay profile, non-proportionality and energy resolution</i>
11:45	–	12:00	Andrei Belsky:	<i>Time-resolved luminescence z-scan using power fs laser pulses</i>
12:00	–	12:15	Pavlo Arhipov:	<i>Features of YAG and YAG:Ce scintillation crystals grown under CO-containing atmosphere</i>
12:15	–	12:30	Karol Bartosiewicz:	<i>The Ce and Li concentration ratio influence on the scintillation and luminescence features in <math>Gd_3Ga_3Al_2O_{12}</math> single crystals</i>
12:30	–	12:45	Maksym Buryi:	<i>Charge trapping and energy transfer in <math>Y(Lu)_3Al_5O_{12}:Eu,(Fe)</math> ceramics: EPR and TSL study</i>

12:50 – 13:30 **Buffet Lunches**

*Location: Conference site*

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13:30 – 22:00 **Conference trip with excursion**

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*Location: Plzen, Pilsen Urquell Brewery and Brewery Museum . Start from conference site*

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19:00 – 21:00 **Conference Dinner**

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*Location: Plzen, restaurant Spilka in the area of Pilsen Urquell Brewery*

# Thursday, 13 September 2018

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## 09:00 – 10:45 **Session 9 – NDET&Instr II.**

*Location: Lecture Hall*

- 09:00 – 09:30 E. Zych: *Pr<sup>3+</sup> luminescence for wide-range thermometry*
- 09:30 – 09:45 Steffen Greulich: *Particle Detection Efficiency of Fluorescent Nuclear Track Detectors in Various Clinical Ion Beams*
- 09:45 – 10:00 Vladimir Pankratov: *Luminescence spectroscopy under synchrotron radiation: from SUPERLUMI to FINESTLUMI*
- 10:00 – 10:15 Li-Yen Chen: *Development and verification of a new OSL-ring dosimeter system*
- 10:15 – 10:30 Oleksandr Sobolev: *Hierarchical clustering of CsI(Tl) scintillation detector pulses*
- 10:30 – 10:45 Quoc Vuong Phan: *Pulse shape discrimination study with new Tl<sub>2</sub>ZrCl<sub>6</sub> crystal scintillator*

10:45 – 11:15 Coffee break, Poster II removal

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## 11:15 – 13:00 **Session 10 – RL&SM-ET&S-TSL&OSL III.**

*Location: Lecture Hall*

- 11:15 – 11:45 Edith Bourret: *Investigations of halide scintillators at the atomic and micro scale*
- 11:45 – 12:00 Reuven Chen: *Thermoluminescence governed by the Auger-recombination process*
- 12:00 – 12:15 Winicjusz Drozdowski:  *$\beta$ -Ga<sub>2</sub>O<sub>3</sub>:Ce as a Fast Scintillator: a Doubtful Role of Cerium*
- 12:15 – 12:30 Marek Grinberg: *Normal and anomalous luminescence in SrS:0.05%Ce<sup>3+</sup> under high hydrostatic pressure*
- 12:30 – 12:45 Miroslav Kucera: *Growth and scintillation properties of Ce<sup>3+</sup>-doped thin film garnet and perovskite scintillators*
- 12:45 – 13:00 Kyoung Jin Kim: *Effects of nonstoichiometric composition on luminescence and scintillation properties of Ce doped Gd<sub>3</sub>Al<sub>2</sub>Ga<sub>3</sub>O<sub>12</sub> single crystals*

13:00 – 14:30 Lunch break, Poster III installation

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14:30 – 16:15 **Session 11 – Appl-LM-Dosim II**

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*Location: Lecture Hall*

14:30 – 15:00 Marijke De Saint-Hubert: *Fluorescent nuclear track detectors (FNTDs) to model RBE in proton therapy: correlation to microdosimetric quantities and biological observations*

15:00 – 15:15 Adrie J.J. Bos: *Experimental Alpha Particle Microdosimetry using Fluorescent Nuclear Track Detectors*

15:15 – 15:30 Antoine Zink: *LM-OSL investigations of X-rays irradiation on terracotta*

15:30 – 15:45 Hui-Yu Tsai: *Clinical Application of Ionization Density Dependence of the Glow Curve Characteristics for Linear Energy Transfer (LET) Measurements in Therapeutic Proton Beams*

15:45 – 16:00 Ilan Eliyahu: *Are there dose-rate effects in the thermoluminescence of LiF:Mg,Ti (HARSHAW)?*

16:00 – 16:15 Siritorn Buranurak: *Statistical-based modeling and nanoDot OSL dosimetry for evaluation of potential factors contributing to radiation-induced skin injury during Transarterial Chemoembolization*

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16:15 – 18:00 **Poster session III with refreshment (RL&SM-ET&S-TSL&OSL, PChLM&Techn, NDET&Instr, Emerg-Dosim)**

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# Friday, 14 September 2018

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09:00 – 11:00 **Session 12 – RL&SM-ET&S-TSL&OSL IV**

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*Location: Lecture Hall*

- 09:00 – 09:30 Mikhail G Brik: *First-principles calculations of optical properties of scintillating materials*
- 09:30 – 09:45 Arkadiusz Mandowski: *Bi-localized recombination*
- 09:45 – 10:00 Vitali Nagirnyi: *Energy transfer processes upon thermal quenching of self-trapped excitons in CdWO<sub>4</sub>:Sm crystals*
- 10:00 – 10:15 Petr Průša: *Thermoluminescence of LuAG:Ce,Mg epitaxial films*
- 10:15 – 10:30 Natalia Yu. Vereschagina: *TSL and OSL kinetics with impeded transport of charge carriers*
- 10:30 – 10:45 Ivan Venevtsev: *Correlation between TSL and temperature behavior of the X-ray excited luminescence below room temperature in cerium doped garnets*
- 10:45 – 11:00 Makaiko L Chithambo: *Thermal effects on stimulated luminescence of SrAl<sub>2</sub>O<sub>4</sub>:Eu<sup>2+</sup>,Dy<sup>3+</sup> and Sr<sub>4</sub>Al<sub>14</sub>O<sub>25</sub>:Eu<sup>2+</sup>, Dy<sup>3+</sup>: Thermal assistance and thermal quenching*
- 11:00 – 11:30 Coffee break, Poster III removal

11:30 – 13:00

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**Session 13 – Emerg-Dosim**

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*Location: Lecture Hall*

- 11:30 – 12:00 Sergey Sholom: *Emergency Luminescent Dosimetry using modern smartphones*
- 12:00 – 12:15 Céline Bassinet: *Investigation of luminescence signal properties from common salts (NaCl) and salted snacks for radiation accident dosimetry*
- 12:15 – 12:30 Stephen W.S. McKeever: *Observations regarding the Build-Up Effect in Radiophotoluminescence of Silver-Doped Phosphate Glasses*
- 12:30 – 12:45 Xiaopu Chen: *Fabrication and performance optimization of  $Mg^{2+}$  codoped  $Ce:Lu_3Al_5O_{12}$  scintillation ceramics*
- 12:45 – 13:00 Ioanna K. Sfampa: *TL measurements of in-vitro and in-vivo aged feldspathic porcelain*
- 13:00 – 13:30 Conference summary and closing

*Location: Lecture Hall*