

## Oral Contributions

### Keynote Presentations

- K1 **30 years of REI: history and perspective**  
Mazzoldi
- K2 **Attosecond electronic excitation by swift heavy ions: material modifications at the nanometer scale.**  
Toulemonde
- K3 **Can ion beams control nanostructures in insulators?**  
Bernas

### Invited Presentations

- I1 **Dynamic Simulation of Collision Cascades and Thermal Spikes in Ceramics**  
Devanathan, Weber
- I2 **Response of  $A_2B_2O_7$  Pyrochlore to Irradiation and Pressure: a New High-Pressure Phase**  
Lang
- I3 **Study of defects in implanted silica glass by Depth Profile Positron Annihilation Spectroscopy**  
Brusa
- I4 **Ion tracks and density fluctuations in swift heavy ion irradiated silica**  
Kluth, Schnohr, Pakarinen, Djurabekova, Giulian, Sprouster, Ridgway, Byrne, Trautmann, Nordlund, Toulemonde
- I5 **Optical waveguides in Nd:YAG transparent ceramics produced by ion implantation**  
Chen, Tan, Jaque
- I6 **Ion tracks in silica for engineering the embedded nanoparticles**  
Avasthi
- I7 **Nano-patterned Ion Implantation into Insulators with Porous Alumina Masks**  
Kishimoto, Zheng, Nakamura, Sato
- I8 **Radiation Tolerance of Fluorite-structured Oxides Submitted to Swift Ion Irradiation**  
Garrido, Moll, Nowicki, Sattonnay, Thom e, Vincent

### Oral Presentations

- O01 **On the Role of Kinetics in the Disordering and Reordering of Pyrochlores during Irradiation**  
Uberuaga, Jiang, Stanek, Sickafus, Scott, Smith
- O02 **Predicted Structure and Stability of  $A_4B_3O_{12}$  delta-phase Compositions**  
Stanek, Jiang, Uberuaga, Sickafus, Grimes
- O03 **Accumulation of disordered zone in  $MgAl_2O_4$  irradiated with swift heavy ions**  
Yasuda, Etho, Kawasoe, Yamamoto, Matsumura
- O04 **Phase transformation of  $ZrO_2$  induced by ion irradiation at high pressure**  
Schuster, Lang, Neumann, Trautmann
- O05 **Defects and swelling induced in yttria-stabilised zirconia by swift heavy ion irradiations**  
Costantini  
WITHDRAWN
- O06 **Ion beam enhanced crystallization of sol-gel grown  $TiO_2$  films**

Nastasi

- O07 **Damage recovery and optical activity of Europium implanted wide gap oxides**  
Alves, Monteiro, Marques, Alves, Peres
- O08 **Effects of swift heavy ion irradiation on the structure of Er<sub>2</sub>O<sub>3</sub>-doped CeO<sub>2</sub>**  
Zhu, Iwase, Yasunaga, Ishikawa, Baba, Okamoto, Hirao, Ohno, Tahara
- O09 **Basic Properties of Radiation-Induced Point Defects in Halides and Oxides**  
Popov, Kotomin, Maier
- O11 **First principles calculations of point defects in ABO<sub>3</sub> perovskites**  
Kotomin, Zhukovskii, Piskunov, Maier
- O12 **Structure of swift heavy ion tracks and their use in nanocluster modification, studied with molecular dynamics**  
Pakarinen, Djurabekova, Nordlund, Kluth, Ridgway
- O13 **Modelling cascade events in uranium dioxide**  
Bishop, Grimes, Parfitt, Uberuaga
- O14 **Defect Production in Tin Doped Indium Oxide (ITO) Films Induced by 1 MeV Proton Bombardment**  
Amolo, Comins, Derry
- O15 **Insights on Irradiation-Induced Amorphization in Silicon Carbide**  
Weber, Gao
- O16 **Effects of SHI on Band gap of Strained AlGa<sub>N</sub>/Ga<sub>N</sub> Multi Quantum Wells**  
Sathish, Devaraju, Pathak, Turos, Khan, Avasthi, Bazzan, Trave, Mazzoldi, Arora
- O17 **In situ and postradiation analysis of mechanical stress in Al<sub>2</sub>O<sub>3</sub>:Cr induced by swift heavy ion irradiation**  
Skuratov, Bujnarowski, Kovalev, O'Connell, Havancsak
- O18 **Ion irradiation effects on tungsten-oxide films and charge state effect on electronic erosion**  
Matsunami, Sataka, Okayasu, Kakiuchida
- O19 **Infrared study of astrophysical ice analogues irradiated by swift nickel ions**  
Domaracka, Duarte, Boduch, Rothard, Dartois, Pilling, Farenzena, da Silveira
- O10 **The Relationship between Displacement Energy Threshold and Frenkel Pair Formation Energy in Ionic Systems**  
Smith, Kittiratanawasin, Uberuaga, Sickafus
- O20 **Phase transformations induced by swift heavy ions**  
Benyagoub
- O21 **Heat transport mechanisms in swift heavy ion irradiated insulators**  
Osmani, Schleberger, Rethfeld
- O22 **Thermodynamics of fission products in dispersion fuel designs – modeling from first-principles and atomistics**  
Liu, Uberuaga, Nerikar, Stanek, Sinnott, Phillpot, Sickafus
- O23 **Comparative study of damage formation in lithium niobate due to the nuclear and electronic energy loss**  
Gischkat, Queitzsch, Schrempel, Wesch
- O24 **Optical waveguides obtained by swift-ion irradiation on silica**  
Manzano, Zobot, Crespillo, Olivares, Agulló-López, Moroño, Hodgson  
MOVED TO POSTER SESSION C
- O25 **The fabrication of optically active silica nanowires by ion-implantation**  
Elliman, Kim, Shalav, Venkatachalam
- O26 **Ion irradiation-induced selective bonds breaking in chalcogenides glasses**

- De Bastiani, Carria, Mio, Gibilisco, Pennisi, Grimaldi, Rimini
- O27 **Spectral Dependence of Optical Nonlinearity of Metal Nanoparticles fabricated by ion implantation**  
Takeda
- O28 **Photoluminescence from Ge nanocrystals produced by hot implantation into SiO<sub>2</sub>**  
Behar
- O29 **Au implantation in Er-implanted silica: effect of the Au dose and specific annealing treatments in controlling the Au clusterization process**  
Maurizio, Perotto, Trave, Pellegrini, Mattei, Battaglin, Mazzoldi
- O30 **Metal nanoparticle elongation by swift heavy-ion irradiation**  
Ridgway, Kluth, Giulian, Sprouster, Araujo, Schnohr, Llewellyn, Byrne, Toulemonde
- O31 **Saturation of the ion-hammering effect for large non-hydrostatic capillarity stresses**  
Rizza
- O32 **Irradiation Effects of Swift Heavy Ions on Zinc and Zinc-Oxide Nanoparticles**  
Amekura, Ishikawa, Buchal, Mantl, Kishimoto
- O33 **Fast Ion collisions with fullerenes and solids: influence of collective resonance**  
Tribedi, Kelkar
- O34 **The influence of insulating substrate on the electrical measurements of FIB fabricated electrodes with nano gap spacing**  
Singh, Rajput, Dhamodaran, Kumar, Kulkarni
- O35 **Modification of anatase TiO<sub>2</sub> thin films by a Focused Ion Beam**  
Surpi, Kubart, Martin, Göthelid, Hultman, Jensen
- O36 **High definition surface micromachining of LiNbO<sub>3</sub> by ion implantation**  
Chiarini, Bentini, Bianconi, De Nicola
- O37 **Nano-hillock formation due to impact of highly charged ions on HOPG**  
Ritter, Kowarik, Meissl, Maunoury, Lebius, Dufour, Toulemonde, Aumayr
- O38 **Dynamical hierarchical methods for the irradiation of clusters and molecules in contact with an environment**  
Suraud
- O39 **Ensembles of metallic wires obtained as replicas of etched ion tracks in polymer matrixes: structure and properties**  
Zagorskiy, Oleinikov, Bedin, Shananin, Mchedlishvili
- O40 **Metal ion implantation in inert polymers for strain gauge applications**  
Di Girolamo, Massaro, Piscopiello, Tapfer
- O41 **Influence of Ion Irradiation on The Transport Properties of Organic Field-Effect Transistors**  
Fraboni, Cavallini, Wang, Nastasi, Cosseddu, Bonfiglio
- O42 **Ion current oscillations inside a single ion track nanopore**  
Xue, Xie, Wang, Wang
- O43 **Electrostatic Charging In Particle-Insulator Collisions**  
Baragiola, Shi, Fama
- O44 **Radiation sensitive patternable hybrid organic-inorganic materials for micro- and nano-patterning**  
Brusatin, Della Giustina, Guglielmi, Romanato, Palazzesi, Casalboni, Proposito