

9:00 - 15:30 **Pre-conference hike**

18:00 - 21:00 **Registration and welcome reception**

- 8:40 **Opening of Conference by Prof. Juhani Keinonen, head of the Department of Physics**
- Session I Carbon based materials**
Chair: Juhani Keinonen
- 9:00 Targeted defect generation and diffusion of vacancies in diamond **I-1**
Sébastien Pezzagna and Jan Meijer
- 9:30 A diamond-based biosensor for exocytosis detection from chromaffin cells realized with ion beam lithography **O-1**
Federico Picollo, Valentina Carabelli, Emilio Carbone, Sara Gosso, Paolo Olivero, Alberto Pasquarelli and Ettore Vittone
- 9:50 Confinement effects of ion tracks in ultra-thin polymer films **I-2**
R. M. Papaléo
- 10:20 **Coffee break**
- Session II Silicon dioxide**
Chair: Wemer Wesch
- 10:50 Comparative study of high energy ion beam-irradiation effects on α -quartz and silica based on in-situ optical measurements **I-3**
*J. Olivares, J. Manzano-Santamaría, M. L. Crespillo, D. Jiménez-Rey, F. Agulló-López, O. Peña-Rodríguez, A. Rivera, M. J. Caturla and E. Bringa, **presented by A. Rivera***
- 11:20 Simulated radiation damage by heavy ion irradiation **O-2**
Yanwen Zhang, Ke Jin and William J. Weber
- 11:40 Optical comparison of radiation-induced luminescent defects in Ag-activated phosphate glass and lif films and their applications in 2-D imaging **O-3**
Toshio Kurobori, Yuka Miyamoto, Youichi Maruyama, Takayoshi Yamamoto and Toshihiko Sasaki
- 12:00 Effect of ultrasmall Au-Ag aggregates formed by ion implantation in Er-implanted silica on the 1.54 μm Er^{3+} luminescence **O-4**
Chiara Maurizio, Tiziana Cesca, Giovanni Mattei and Paolo Mazzoldi

12:20	Lunch	
Session III	Swift heavy ion effects 1 <i>Chair: Christina Trautmann</i>	
13:30	Swift heavy ion track formation and defect annealing modeled by Molecular Dynamics <i>O. H. Pakarinen, M. Backman, F. Djurabekova, K. Nordlund, Y. Zhang, M. Toulemonde, A. Debelle, P. Kluth, M. C. Ridgway and W. J. Weber</i>	I-4
14:00	Oxide glass structure evolution under swift heavy ion irradiation <i>S. Peugeot, C. Mendoza, A. H. Mir, T. Charpentier, M. Moskura, R. Caraballo, O. Bouty, M. Toulemonde, S. Bouffard and M. Toulemonde</i>	O-5
14:20	Ion tracks in amorphous silicon and amorphous germanium <i>Thomas Bierschenk</i>	O-6
14:40	Annealing behaviour of swift heavy ion tracks in quartz <i>B. Afra, K. Nordlund, W. J. Weber, M. D. Rodriguez, T. Bierschenk, M. C. Ridgway, C. Trautmann, N. Kirby and P. Kluth</i>	O-7
15:00	Coffee break	
Session IV	Swift heavy ion effects 2 <i>Chair: Marcel Toulemonde</i>	
15:30	Memorial of Lew Chadderton	
15:50	Formation and stability of ion tracks under high pressure <i>Patrick Kluth</i>	I-5
16:20	Behavior of nuclear materials irradiated with a dual ion beam <i>Lionel Thomé, Aurélien Debelle, Frédéric Garrido, Patrick Trocellier, Yves Serruys and Gihan Velisa</i>	O-8
16:40	Swift heavy ion induced crystalline-crystalline transformation in rare earth sesquioxides <i>M. Lang, F. X. Zhang, J. M. Zhang, C. L. Tracy, A. Cusick, J. Vonehr, Z. Q. Chen, D. Severin, M. Bender, D. Severin and R. C. Ewing</i>	O-9

Monday, July 1, 2013

- 17:00 On the threshold of damage formation in aluminium oxide via electronic excitations **O-10**
Vladimir Skuratov, Jacques O'connell, Nikita Kirilkin and Jan Neethling
- 17:20 Angle-dependent sputtering and pattern formation by polyatomic ion irradiation (**was PB-50**) **O-49**
Lothar Bischoff, Bernd Schmidt, Roman Böttger and Wolfgang Pilz
- 18:00-20:00 **Reception of the rector of the University of Helsinki**

Session V	Low-dimensional materials <i>Chair: Dorothy Duffy</i>	
9:00	Defect Creation In Graphene By Ion Irradiation <i>J. Hopster, O. Ochedowski, R. Kozubek and <u>M. Schleberger</u></i>	I-6
9:30	Ion tracks in amorphous carbon and nanodiamond <i><u>E. M. Bringa</u> and D. Schwen</i>	O-12
9:50	Effect of swift heavy ion irradiation on single- and multiwalled carbon nanotubes <i><u>Andrzej Olejniczak</u> and Vladimir A. Skuratov</i>	O-13
10:10	Electron irradiation effects in two-dimensional insulators <i><u>Hannu-Pekka Komsa</u> and Arkady V. Krasheninnikov</i>	O-14
10:30	Coffee break and conference photograph	
Session VI	Formation of nanostructures <i>Chair: Paulo Fichtner</i>	
10:50	Carbon nanowires generated by ion irradiation of hydrocarbons ices <i><u>Orazio Puglisi</u>, Giuseppe Compagnini, Luisa D'urso, Giuseppe A. Baratta, Maria E. Palumbo and Giovanni Strazzulla</i>	I-7
11:20	Ion beam irradiated photonic guiding microstructures in laser crystals <i><u>Feng Chen</u></i>	O-15
11:40	Surface patterning by heavy-ion induced melting <i><u>Roman Böttger</u>, Bartosz Liedke, Lothar Bischoff, Karl-Heinz Heinig, Christian Anders and Herbert M. Urbassek</i>	O-16
12:00	Ion beam ultra-precision surface smoothing of insulators <i><u>Bernd Rauschenbach</u>, Frank Frost and Axel Schindler</i>	O-17
12:20	Lunch	
Session VII	Ceramics 1 <i>Chair: William J. Weber</i>	
13:30	Interactions of radiation defects with grain boundaries in covalent ceramics <i><u>I. Szlufarska</u>, D. Morgan, C. Jiang and N. Swaminathan</i>	I-8

- 14:00 Effect of pressure and temperature on the radiation resistance of pyrochlores **O-18**
Alain Chartier and Gilles Catillon
- 14:20 Effects of energetic ion irradiation on CeO₂ bulk pellets and thin films **O-19**
T. Kishino, K. Shimizu, A. Iwase, Y. Saitoh, N. Ishikawa, Y. Baba, N. Hirao and Y. Okamoto
- 14:40 Raman scattering probing of irradiation-induced damage in UO₂, 6H-SiC and pyrochlores **O-20**
Patrick Simon, Olga A. Maslova, Guillaume Guimbretiere, Aurélien Canizares, Mohamed-Ramzi Ammar, Florence Linez, Florian Duval, Marie Barthe-France and Lionel Desgranges
- 15:00 **Coffee break**
- 15:30-17:30 **Poster session 1**
Chairs: Vladimir Skuratov and Jyrki Räisänen
- 18:00-22:00 **Sauna**

Session VIII Nanoparticles

Chair: Giovanni Mattei

- 9:00 Nanostructured materials: damaged by or fabricated from ion irradiations **I-9**
Yugang Wang
- 9:30 Thermally stable nanoclusters embedded in dielectric substrates: effects of electron irradiation **O-21**
Paulo F. P. Fichtner
- 9:50 Luminescent ultra-small gold nanoparticles obtained by ion implantation in silica **O-22**
Tiziana Cesca, Chiara Maurizio, Boris Kalinic, Carlo Scian, Giancarlo Battaglin, Paolo Mazzoldi and Giovanni Mattei
- 10:10 Photoluminescence study performed at room and low temperatures of Eu implanted at high temperature into SiO₂. **O-23**
Moni Behar, Paulo Franzen and Henri Boudinov
- 10:30 **Coffee break**

Session IX Surfaces

Chair: Karl-Heinz Heinig

- 10:50 Molecular ion imaging with swift heavy ions **I-10**
J. Matsuo, S. Nakagawa, M. Fujii, T. Seki and T. Aoki
- 11:20 Terbium implanted Al_xGa_{1-x}N alloys: Damage and optical effects **O-24**
Eduardo Alves, Maria Fialho, Katharina Lorenz and Teresa Monteiro
- 11:40 Creation of pyramidal pits in CaF₂ single crystals by slow highly charged ions **O-25**
Ayman Sherif El-Said
- 12:00 The role of microstructure on the optical performance of neutron irradiated dielectric mirrors **O-26**
Keith J. Leonard, Gerald E. Jellison and Lance L. Snead
- 12:20 **Lunch**

Session X Simulations

Chair: Devesh Avasti

- 13:30 Molecular dynamics simulations of high-energy radiation damage **I-11**
Kostya Trachenko
- 14:00 Including electronic effects in radiation damage simulations of band gap materials **O-27**
Dorothy Duffy, Szymon Daraszewicz, Yvelin Giret and Alex Shluger
- 14:20 The sensitivity of the threshold displacement energy to temperature and time scale **O-28**
Marc Robinson, Nigel A. Marks and Greg R. Lumpkin
- 14:40 Examining the structure of Ge nanoclusters in silica by EXAFS and molecular dynamics **O-29**
K. Avchaciov, F. Djurabekova and K. Nordlund
- 15:00 **Coffee break**
- 15:30-17:30 **Poster session 2**
Chairs: Jiro Matsuo and Timo Sajavaara
- 17:30 - 19:00 **Reception of the city of Helsinki**

Session XI Swift heavy ion effects 3*Chair: Lionel Thomé*

- 9:00 Combined experimental and computational study of the recrystallization process induced by electronic interactions of swift heavy ions with silicon carbide **I-12**
A. Debelle, M. Backman, L. Thomé, K. Nordlund, F. Djurabekova, W. J. Weber, M. Toulemonde, O. H. Pakarinen, F. Garrido and F. Paumier
- 9:30 Swift heavy ion irradiation of ceria and thoria **O-30**
Cameron Tracy, John Pray, Maik Lang, Jiaming Zhang, Dmitry Popov, Markus Bender, Daniel Severin, Christina Trautmann and William Weber
- 9:50 Atomic structure of ion tracks in ceria **O-31**
Seiya Takaki, Kazuhiro Yasuda, Tomokazu Yamamoto, Syo Matsumura and Norito Ishikawa
- 10:10 Track Morphology and Amorphization Kinetics Induced by 185 MeV Au-Ion Irradiation in LiNbO₃ **O-32**
Jura Rensberg, Thomas Bierschenk, Mark C. Ridgway, Boshra Afra, Matias D. Rodriguez, Patrick Kluth, Jana Sommerfeld, Steffen Milz and Werner Wesch
- 10:30 **Coffee break**
- Session XII Ceramics 2**
- Chair: Eduardo Alves*
- 10:50 Radiation defects in complex perovskite solid solutions **O-33**
M. M. Kuklja, E. A. Kotomin, O. Sharia, Y. A. Mastrikov and J. Maierc
- 11:10 Ion-irradiation-induced Reduction in Sr₂Fe_{1.5}MO_{0.5}O_{6-Δ} Perovskite **O-34**
Siwei Wang, Ming Tang, Kyle S. Brinkman and Fanglin Chen
- 11:30 Ion-beam induced stress-evolution in lithium niobate **O-35**
Emanuel Schmidt, Tobias Steinbach and Werner Wesch
- 11:50 Experimental approach and atomistic simulations to investigate the radiation tolerance of complex oxides: application to the amorphization of pyrochlores **O-36**
G. Sattonnay, L. Thomé, N. Sellami, C. Legros, C. Grygiel, I. Monnet, C. Decorse, P. Simon and R. Tétot

12:10	Lunch	
Session XIII	Uranium dioxide	
	<i>Chair: Yanwen Zhang</i>	
13:30	In-situ TEM observation of nano-void formation in UO ₂ under irradiation. <i>Catherine Sabathier, Amélie Michel, Guillaume Martin, Gaëlle Carlot, Franck Fortuna and Philippe Garcia</i>	O-37
13:50	Pipe diffusion along dislocations in UO ₂ <i>Samuel T. Murphy, Eleanor E. Jay and Robin W. Grimes</i>	O-38
14:10	Multi-scale XRD study of strains due to He implantation in UO ₂ polycrystals <i>A. Richard, H. Palancher, E. Castelier, J. S. Micha, H. Rouquette and Ph. Goudeau</i>	O-39
14:30	Radiation induced effects in urania (UO ₂) single crystal <i>Tien Hien Nguyen, Frédérico Garrido, Aurélien Debelle, Stamatia Mynolas and Lionel Thome</i>	O-40
14:50	Impurity-limited disorder annealing in ion-implanted ZnO <i>A. Yu. Azarov, A. Hallén, B. G. Svensson and A. Yu. Kuznetsov</i>	O-41
16:00	Conference cruise	
17:40	Guided tour to Suomenlinna	
18:40	Conference dinner	

Session XIV Semiconductors*Chair: Eugene Kotomin*

- 9:00 Defect-induced ferromagnetism in semiconductors: a controllable approach by particle irradiation **I-13**
Shengqiang Zhou
- 9:30 RBS channelling studies of Ar ion implanted GaN **O-42**
E. Wendler and K. Lorenz
- 9:50 Two-temperature Molecular Dynamics study on swift heavy ion track formation in SiO₂ **O-43**
Aleksi Leino, S. Daraszewics, O. Pakarinen, F. Djurabekova and K. Nordlund
- 10:10 Lattice sites of implanted Mg in the group-III nitrides **O-44**
L. Amorim, U. Wahl, S. Decoster, L. M. C. Pereira, J. G. Correia, D. Silva, K. Temst and A. Vantomme
- 10:30 **Coffee break**

Session XV Ion beam shaping*Chair: Yasuda Kazuhiro*

- 10:50 Beyond the ion-beam shaping mechanism: toward plasmonic applications **I-14**
Giancarlo Rizza, Pierre-Eugne Coulon, Abdallah Slablab, Sandrine Peruchas, Isabelle Monnet, Christian Dufour, Vladimir Khomenkov, Julien Cardin, Alexandre Fafin and Julien Cardin
- 11:20 Elongation of Metal Nanoparticles by Swift Heavy Ion Irradiation: Approximated Scaling Relations **O-45**
Hiro Amekura, Satyabrata Mohapatra, Udai Singh, Saif Khan, Devesh Avasthi, Nariaki Okubo and Norito Ishikawa
- 11:40 Deformation of Au nano particles embedded in sapphire by swift heavy ions **O-46**
Pablo-Ernesto Mota-Santiago, Paulina Fuentes-Morales, Héctor-Gabriel Silva-Pereyra and Alejandro Crespo-Sosa

- 12:00 Elongation of silver nanoparticles under irradiation with swift heavy ions: An in-situ optical study **O-47**
Ovidio Peña-Rodríguez, José Olivares, Antonio Rivera, Luis Rodríguez-Fernández, Alejandro Crespo-Sosa, Juan Carlos Cheang-Wong and Alicia Oliver
- 12:20 Tuning of plasmonic response by swift heavy ion irradiation of nanocomposite thin films with noble metal nanoparticles in polymer, a-C and fullerene matrices **O-48**
R. Singhal, D C Agarwal, Udai B Singh, Y K Mishra, C V S Kiran, F. Faupel and D K Avasthi
- 12:40 - 13:00 **Closing of conference**

Optical properties

- OSL and TL characterization of beta irradiated $\text{SrAl}_2\text{O}_4\cdot\text{Eu}^{2+}$, Dy^{3+} persistent luminescence phosphors **PA-1**
N. J. Ziga-Ribera, R. Garca, R. Meléndrez, V. Chernov, M. Pedroza-Montero and M. Barboza-Flores
- Ellipsometric characterization of ion-implanted single-crystal diamond **PA-2**
Alfio Battiato, Paolo Olivero, Federico Bosia, Ettore Vittone and Anna Sytchkova
- Leaky mode suppression in planar optical waveguides written in CaF_2 crystal via double energy implantation with MeV N^+ ions **PA-3**
István Bányász, Zolt Zolnai, Simone Berneschi, Gualtiero Nunzi Conti, Stefano Pelli and Miklós Fried
- Preliminary results on the relationship between luminescence and crystalline structure of lithium metatitanate **PA-4**
Virgilio Correcher and Mara Gonzalez
- Creation of F2 and F3+ centers in lithium fluoride crystals irradiated with energetic krypton ions **PA-5**
Alena Russakova, Alma Dauletbekova, Kurt Schwartz, Mikhail Sorokin, Janis Maniks, Abdirash Akilbekov, Muratbek Baizhumanov and Maxim Zdorovets
- Electronic excitations of iodine implanted C12A7 ceramics **PA-6**
Eduard Feldbach, Viktor P. Denks, Anders Hallén, Marco Kirm, Annika Pille and Eliko Tldsepp
- Thermal and radiation effects on the UV-blue luminescence emission band of a natural blue calcium carbonate rock **PA-7**
Virgilio Correcher and J. Garcia-Guinea
- Characterization of channel waveguide in KNSBN crystal by swift heavy ion irradiation **PA-8**
Jing Guan, Lei Wang and Gang Fu
- Thermoluminescence study in reactor neutrons irradiated pure $\text{Y}_3\text{Al}_5\text{O}_{12}$, Al_2O_3 and SiC single crystals **PA-9**
Meftah Ali

- Luminescent quantum dots formed in the alternating Si/SiO₂ nanolayers by irradiation with swift heavy ions **PA-10**
G. A. Kachurin, S. G. Cherkova, V. A. Volodin, A. G. Cherkov, V. A. Skuratov, G. N. Kamaev and A. H. Antonenko
- Temperature dependence of the photostimulated luminescence in KCl:Eu²⁺ storage phosphor dosimeters **PA-11**
Zhiyan Xiao, Rachael Hansel and H. Harold Li
- Luminescence and radiation defects creation in heavy-ion-containing metal oxides **PA-12**
Aleksandr Lushchik, Cheslav Lushchik, Irina Kudryavtseva, Sapargali Pazyzbek, Evgeni Shablonin, Anna Shugai and Evgeni Vasil'chenko
- Swift heavy ion induced modifications of luminescence and mechanical properties of polypropylene/zno nanocomposites **PA-13**
J. Maniks, L. Gigorjeva, R. Zabels, D. Millers, I. Bochkov, J. Zicans and T. Ivanova
- Simulation of the optical spectra of noble metal nano-particles with effective medium theory **PA-14**
Carlos Marques, Lus Alves, Rui Silva and Eduardo Alves
- X-ray and EUV optical transmittance of micro- and nanoporous filters produced by ion track etching **PA-15**
A. Mitrofanov and P. Apel
- Photoluminescence of Nitrogen-Vacancy centres in diamond: the quenching effect of radiation damage in proton implanted diamond. **PA-16**
D. Gatto Monticone, F. Quercioli, R. Mercatelli, S. Soria, A. Lo Giudice, P. Olivero and E. Vittone
- Design and focussed proton beam fabrication of transmission optical gratings of quasi-sinusoidal profile in glass **PA-17**
I. Bányász, I. Rajta and G. U. L. Nagy
- RPL and PL properties of glass dosimeter **PA-18**
Hidehito Nanto, Takeru Ohno, Yuka Miyamoto, Yoshinori Takei, Kazuki Hirasawa, Toshio Kurobori and Takayoshi Yamamoto

- Time-resolved luminescent spectroscopy of led heterostructures based on InGaN/GaN - quantum wells excited by high current electron beam **PA-19**
Vladimir Oleshko, Svetlana Gorina, Vladimir Korepanov and Victor Lisitsyn
- Rare earth ion implantation in a non-linear optical material **PA-20**
Olivier Plantevin, Geraldine Dantelle and Ludovic Mayer
- Thermoluminescence response of a mixed quaternary alkali halide crystal exposed to gamma-rays. **PA-21**
R Rodriguez-Mijangos, R. Perez-Salas, G. Vázquez-Polo and P. González-Martínez
- Ridge waveguide fabricated by combining ion implantation and precise dicing **PA-22**
Yu-Fan Zhou, Lei Wang, Peng Liu, Tao Liu, Lian Zhang, Xiao-Fei Yu and Xue-Lin Wang
- Effects of multi-energy He ion implantation on Nd:YGG crystal **PA-23**
Jin-Hua Zhao, Jing Du, Xi-Feng Qin, Feng-Xiang Wang, Gang Fu and Xue-Lin Wang
- The formation of magnetic silicide Fe₃Si clusters at ion implantation **PA-24**
N. Balakirev, V. Zhikharev and G. Gumarov

Structure evolution and mechanical properties

- The use of the 'twin oxides' zirconia and hafnia as a probe for studying structural transformations induced by high and low energy ions **PA-25**
Abdenacer Benyagoub
- Study of alpha, epsilon and gamma -phases of iron nitride thin films **PA-26**
Ewelina Zofia Fratzczak, José Emilio Prieto and Marek Edward Moneta
- Evolution of mechanical properties of the iron carbide Fe_3C subjected to cumulative 1 keV Fe recoils **PA-27**
K. O. E. Henriksson and K. Nordlund
- Temperature dependence of swift heavy ion beam induced structural modifications in pyrochlores **PA-28**
Renu Kumari, P. K. Kulriya, S. Mohapatra, V. Grover, R. Shukla, A. K. Tyagi and D. K. Avasthi
- Swift heavy ion induced structural modifications in BaTiO_3 : Low temperature in-situ XRD study **PA-29**
Renu Kumari, P. K. Kulriya, S. Mohapatra, K. Vasundhara, S. N. Achary, A. K. Tyagi and D. K. Avasthi
- Ion irradiation-induced structural transitions in orthorhombic Ln_2TiO_5 **PA-30**
Jiaming Zhang, Maik Lang, Fuxiang Zhang, Fengyuan Lu, Jie Lian and Rodney C Ewing
- Average lattice expansion effects of pyrochlore $\text{Lu}_2\text{Ti}_2\text{O}_7$ irradiated by Ne ions **PA-31**
Yuhong Li, Yongqiang Wang, James A. Valdez, Ming Tang and Kurt E. Sickafus
- Swelling of yttrium iron garnet induced by swift heavy ions in the electronic stopping power regime **PA-32**
Ali Meftah, Abdenacer Benyagoub, Jean Jacques Grob, Mahmoud Izerrouken, Soraya Kadid, Nassima Khelifaoui, Jean Paul Stoquert, Marcel Toulemonde and Christina Trautmann

Phase transformation in diamond-like carbon by FIB irradiation and thermal treatment **PA-33**

Peter Philipp

Microstructure evolution during radiation-induced silicon oxidation at room temperature **PA-34**

Kirill Prikhodko, Boris Gurovich, Dmitry Komarov and Darya Kozlova

Transformation of YSZ under high fluence argon ion implantation **PA-35**

Alexandra Suworova, Igor Usov, Sergey Rubanov and J Won

Effects of helium implantation in Al/B₄C metal matrix composite for spent nuclear fuel storage **PA-36**

Feifei Zhang, Lumin Wang, Guang Ran, Gang Yu and Jon Wierschke

Biomaterials

- Explosive Decomposition of PETN Monocrystals Initiated by High Current Electron Beam **PA-37**
Vladimir Oleshko, Svetlana Gorina and Vladimir Lysyk
- Influence of nitrogen ion implantation on filtration of fluoride using polysulfone/chitosan blend membranes **PA-38**
P. Wanichapichart, W. Bootluck and L. D. Yu
- Ion-Beam-Mutation Assisted Identification of Thioredoxin Reductase Gene Involved in Bacterial Antagonism to Fungal Infection of Ornamental Crops **PA-39**
S. Mahadtanapuk, W. Teraarusiri, W. Nanakorn, L. D. Yu and S. Anuntalabhochai
- Ultra-low-energy Ion Beam Bombardment Effect on Naked DNA **PA-40**
L. D. Yu, P. Thopan, P. Thongkumkoon, K. Prakrajang and D. Suwanakachorn
- Ion bombardment effect on inducing DNA transfer in bacterial E. coli cells **PA-41**
L. D. Yu, K. Prakrajang, K. Sangwijit, P. Thongkumkoon, B. Phanchaisri and S. Anuntalabhochai
- Effect of ion beam bombardment of flower leaves on inducing genetic transformation for prolonging longevity of *Torenia founieri* **PA-42**
S. Mahadtanapuk, L. D. Yu and S. Anuntalabhochai
- Diode-like properties of single- and multi-pore asymmetric track membranes **PA-43**
Katarzyna Zielinska, A. Gapeeva, O. L. Orellovitch and P. Yu. Apel

Nano

- Self-healing of swift heavy ions radiation-induced damage in metallic nanowires **PA-44**
J. L. Duan, J. Liu, Y. H. Chen, H. J. Yao, D. Mo, P. F. Zhai, M. D. Hou and Y. M. Sun
- Simulation of the irradiation of carbon nanotubes with carbon projectiles **PA-45**
Santiago Heredia-Avalos, Juan Carlos Moreno-Marn and Cristian D. Denton
- Nanoparticle Synthesis and Thermal Evolutions in SiO₂ by Cu and Zn Ion Sequential Implantation **PA-46**
G. Y. Jia, R. Xu, J. Wang, X. Y. Mu and C. L. Liu
- The irradiation tolerance of ZrO₂/W multilayered nanocomposites under he⁺ ion irradiation **PA-47**
Shuyan Kong
- Molecular dynamics simulations of ion irradiation of GaN nanowires **PA-48**
Wei Ren, Antti Kuronen and Kai Nordlund
- Modifications in Structure and Optical Property of Nanoparticles in SiO₂ by Post Heavy Ion Irradiation **PA-49**
C. L. Liu, G. Y. Jia, J. Wang and X. Y. Mu
- Surface Nanostructures on Low Energy Zn Ion Implanted (100) Si and Their Thermal Evolution at Different Atmospheres **PA-50**
Y. Y. Shen, J. Wang, G. Y. Jia and C. L. Liu
- MD simulation of dlc-carbon nanotube hybrid materials **PA-51**
Wei Ren and Kai Nordlund
- Temperature-dependent exafs analysis of gold nanocrystals embedded in amorphous Si₃N₄ **PA-52**
H. Salama, F. Kreime, D. J. Sprouster, S. Mirzaei, Yj. Shen, P. Kluth and M. C. Ridgway
- Molecular dynamics simulation of channeling in carbon nanotubes array with defects supported by the substrate of porous alumina oxide **PA-53**
Anton Stepanov

- Can high temperature C ion implantation in yttria-stabilized zirconia trigger nanoprecipitate formation? **PA-54**
Gihan Velisa, Patrick Trocellier, Lionel Thomé, Aurélien Debelle, Sandrine Miro and Cyril Bachelet
- Towards Nanomaterials with Tunable Morphology via Cluster Deposition **PA-55**
Annika Venäläinen, A. Pirojenko, V. Tuboltsev, J. Räisänen, M. Kemell and M. Räisänen
- Chemical interaction in tungsten-implanted glassy carbon **PA-56**
Tetsuya Yamaki, Sho Kato, Shunya Yamamoto, Teruyuki Hakoda, Kazuhiro Kawaguchi, Tomohiro Kobayashi, Akihiro Suzuki and Takayuki Terai
- Replication of etched ion tracks for production of Cu, Co, Ni and Fe nanowires **PA-57**
D. L. Zagorskiy, V. V. Korotkov, V. N Kudryavtsev, S. A. Bedin, V. A Oleinikov, S. N. Sulyanov, K. V. Frolov, P. V. Dorovatovskii and B. V. Mchedlishvili
- Stability of coiled carbon nanotubes under ion irradiation **PA-58**
Wei Zhang, Bin Zhou, Cuilan Ren, Chengbin Wang and Ping Huai

Polymers

- Radiation effects of swift heavy ions in polymers: determination of nanoshapes from electro-conductivity **PA-59**
Pavel Apel, Irina Blonskaya, Oleg Orelovich, Bozena Sartowska and Reimar Spohr
- Influence of the microstructure on the efficiency of energy transfers in aliphatic/aromatic polymers under irradiation **PA-60**
M. Ferry, Y. Ngono-Ravache and E. Balanzat
- Swift heavy ion induced modification of aliphatic polymers **PA-61**
Umme Habiba Hossain, Tim Seidl, Daniel Severin, Markus Bender and Wolfgang Ensinger
- Characteristics of chitosan membranes modified by methane ion beam **PA-62**
B. Jaleh, N. Gholami, R. Golbedaghi, Sh. Jafari, M. M. Larijani and P. Wanichapichart
- Characteristics of pvdf membranes irradiated by electron beam **PA-63**
B. Jaleh, N. Gavary and Shila Jafari
- Effect of gamma-ray induced polymerization of initial material PADC on heavy ion track registration parameters **PA-64**
L. L. Kashkarov, S. V. Stovbun, A. I. Mikhailov, A. M. Zanin, V. P. Kolotov, N. N. Dogadkin, G. V. Kalinina and T. A. Pavlova
- Hot electron effect on charge formation in SiO₂ layer enriched by rear-earth based nanoclusters **PA-65**
A. N. Nazarov, S. I. Tiagulskiy, I. P. Tyagulskyy, V. S. Lysenko, L. Rebohle and W. Skorupa
- Modification of polymer hydrogel by ion exchange resins **PA-66**
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Wednesday, July 3, 2013
