



DETAILED PROGRAM

UPDATED ON JUNE 28, 2018

Sunday 1 July

Chair: Marcel TOULEMONDE

14:00 - 15:30 Tutorial #1 // Thermal spike model used for reviewing the ion-matter interaction
Christian Dufour
 CIMAP, Caen, France

15:30 - 16:00 COFFEE BREAK PM

Chair: Clara GRYGIEL

16:00 - 17:30 Tutorial #2 // Multiscale modelling of ion-solid interactions
Kai Nordlund
 Helsinki University, Finland

18:00 - 20:00 WELCOME RECEPTION

Monday 2 July

9:00 - 9:30 OPENING CEREMONY

Chair: Peter SIGMUND

9:30 - 10:30 Electronic stopping of protons and He ions in solids: a (personal) survey INV01-69
Peter BAUER
 Atomic Physics and Surface Science, Institute Experimental Physics, Johannes Kepler University, Austria

LINDHARD
LECTURE

10:30 - 11:10 COFFEE BREAK AM

Chair: Karoly TOKESI

11:10 - 11:40 Stopping power, experimental trends and open subjects, with focus on the low to intermediate energy region INV02-119
Claudia MONTANARI
 Instituto de Astronomia y Fisica del Espacio, CONICET and University of Buenos Aires, Argentina

INVITED TALK

11:40 - 12:00 Nuclear stopping power of antiprotons T01.1-O1-176
Kai NORDLUND⁽¹⁾, **Dage SUNDHOLM**⁽²⁾, **Pekka PYYKKÖ**⁽²⁾, **Flyura DJURABEKOVA**⁽³⁾, **Daniel M. ZAMBRANO**⁽⁴⁾
⁽¹⁾Department of Physics, University of Helsinki, Finland, ⁽²⁾Department of Chemistry, University of Helsinki, Finland, ⁽³⁾Helsinki Institute of Physics, University of Helsinki, Finland, ⁽⁴⁾CERN, Switzerland

Monday 2 July

Basic processes (atomic collisions, scattering, stopping) - Part I

12:00 - 12:20	Electronic stopping in transition metal nitrides Barbara BRUCKNER ⁽¹⁾ , Marcus HANS ⁽²⁾ , Tomas NYBERG ⁽³⁾ , Peter BAUER ⁽⁴⁾ , Daniel PRIMETZHOFFER ⁽¹⁾ <i>(1)Department of Physics and Astronomy, Uppsala University, Sweden, (2)Materials Chemistry, RWTH Aachen University, Germany, (3)Department of Engineering Sciences, Uppsala University, Sweden, (4)Institute of Experimental Physics, Johannes Kepler University Linz, Austria</i>	T01.1-02-68
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12:20 - 14:00 MONDAY LUNCH

Chair: Flyura DJURABEKOVA

14:00 - 14:30	Electronic excitation, luminescence and particle emission: studying ion-induced phenomena in ToF-MEIS Svenja LOHMANN , Maurício SORTICA , Valentina PANETA , Daniel PRIMETZHOFFER <i>Uppsala University, Department of Physics and Astronomy, Box 516, 75120 Uppsala, Sweden</i>	INV03-92
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14:30 - 14:50	Femto-clock for the electronic system in swift-heavy ion tracks Nikita MEDVEDEV ⁽¹⁾ , Alexander VOLKOV ⁽²⁾ <i>(1)Institute of Physics and Institute of Plasma Physics, Academy of Science of Czech Republic, Czech republic, (2)National Research Center 'Kurchatov Institute'; Joint Institute for Nuclear Research; Lebedev Physical Institute of the Russian Academy of Sciences, Russian federation</i>	T02.1-01-50
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Materials(Bulk): Damage, Tracks - Part I

14:50 - 15:10	A non-perturbative approach for the stopping power of ions and dimers in an free electron gas system Pedro Luis GRANDE ⁽¹⁾ , Flavio MATIAS ⁽¹⁾ , Raul Carlos FADANELLI ⁽¹⁾ , Nestor Ricardo ARISTA ⁽²⁾ <i>(1)Universidade Federal do Rio Grande do Sul, Brazil, (2)Centro Atomico de Bariloche, Argentina</i>	T02.1-02-78
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15:10 - 15:30	Probing scattering phase information of ion-atom collisions Shaofeng ZHANG ⁽¹⁾ , Yong GAO ⁽¹⁾ , Xiaolong ZHU ⁽¹⁾ , Dalong GUO ⁽¹⁾ , Michael SCHULZ ⁽²⁾ , Alexander VOITKIV ⁽³⁾ , Xinwen MA ⁽¹⁾ <i>(1)Institute of Modern Physics, CAS, China, (2)Department of Physics and LAMOR, Missouri University of Science & Technology, United States of America, (3)Theoretische Physik I, Heinrich Heine Universität Dusseldorf, Germany</i>	T02.1-03-253
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15:30 - 16:00 COFFEE BREAK PM

Chair: Xinwen MA

16:00 - 16:30 The influences of tracks on two-dimensional functional materials INV04-64
INVITED TALK Jie LIU, Pengfei ZHAI, Jian ZENG, Shengxia ZHANG, Peipei HU, Zongzhen LI, Lijun XU,
Jinglai DUAN, Huijun YAO, Youmei SUN
Institute of Modern Physics, Chinese Academy of Sciences, China

16:30 - 16:50 Latent track formation and surface potential modulation in swift heavy ion
irradiated TMDC nanosheets T03.1-O1-
288
Tanuja MOHANTY, Sanjeev KUMAR
School of Physical Sciences, Jawaharlal Nehru University,, India

Surfaces, 2D materials and Emission Phenomena - Part I

16:50 - 17:10 A comparison between highly charged and swift heavy ion induced defects in
graphene on silicon carbide T03.1-O2-
133
Lara BRÖCKERS⁽¹⁾, Henning LEBIUS⁽²⁾, Stéphane GUILLOUS⁽²⁾, Marika SCHLEBERGER⁽¹⁾
*⁽¹⁾Fakultät für Physik and CENIDE, Universität Duisburg-Essen, Germany, ⁽²⁾CIMAP, ⁽³⁾CEA-
CNRS-ENSICAEN-UCN), France*

17:10 - 17:40 Relaxation pathways of slow highly charged ions transmitted through 2D INV05-97
INVITED TALK materials
**Janine SCHWESTKA⁽¹⁾, Richard A. WILHELM⁽¹⁾, Sascha CREUTZBURG⁽²⁾, Anna NIGGAS⁽¹⁾,
Elisabeth GRUBER⁽¹⁾, Rene HELLER⁽²⁾, Roland KOZUBEK⁽³⁾, Marika SCHLEBERGER⁽³⁾,
Stefan FACSKO⁽²⁾, Friedrich AUMAYR⁽¹⁾**
⁽¹⁾TU Wien, Austria, ⁽²⁾HZDR, Germany, ⁽³⁾University Duisburg-Essen, Germany

Tuesday 3 July

Chair: Denis DAUVERGNE

8:30 - 9:00

INVITED TALK

A locally driven relaxation for ion irradiated solid films

INV06-224

Luca REPETTO, Roberto LO SAVIO, Elena ANGELI, Giuseppe FIRPO, Patrizia GUIDA, Denise PEZZUOLI, Diego REPETTO, Ugo VALBUSA

Department of Physics, Università di Genova, Italy

9:00 - 9:30

INVITED TALK

Molecular Imaging by Transmission SIMS in combination with Secondary Electron Microscope

INV07-10

Kaoru NAKAJIMA, Kazuki YAMAMOTO, Shunya KITAMURA, Hiroaki ISHII, Jumpei SAWADA, Kenji KIMURA

Department of Micro Engineering, Kyoto University, Japan

9:30 - 9:50

A new time-of-flight method to investigate the emission velocity distribution of sputtered particles

T03.2-01-72

Andreas WUCHER, Abdullah SEVIM, Matthias HERDER

Fakultät für Physik, Universität Duisburg-Essen, Germany

Surfaces, 2D materials and Emission Phenomena - Part II

9:50 - 10:10

Cosmic rays electronic sputtering yield of interstellar H₂O ice mantles

T03.2-02-23

Emmanuel DARTOIS⁽¹⁾, Marin CHABOT⁽²⁾, Hermann ROTHARD⁽³⁾, Tijani ID BARKACH⁽²⁾, Philippe BODUCH⁽³⁾, Basile AUGÉ⁽⁴⁾, Adithya Narain AGNIHOTRI⁽³⁾, Alicja DOMARACKA⁽³⁾

⁽¹⁾ISMOUMR8214, CNRS, Univ. Paris Sud, Université Paris-Saclay, F-91405 Orsay, France, France, ⁽²⁾Institut de Physique Nucléaire d'Orsay (IPNO), CNRS-IN2P3, Univ. Paris Sud, Université Paris-Saclay, F-91406 Orsay, France, France, ⁽³⁾Centre de Recherche sur les Ions, les Matériaux et la Photonique CIMAP (CEA/CNRS/ENSICAEN/Université de Caen Normandie), 14070 Caen Cedex 05, France, France, ⁽⁴⁾Centre de Sciences Nucléaires et de Sciences de la Matière, UMR 8609 CNRS/IN2P3-Univ. Paris-Sud, Université Paris-Saclay, 91405 Orsay Campus, France, France

10:10 - 10:30

What do we know about swift heavy ion induced electronic sputtering of insulators

T03.2-03-232

Christina TRAUTMANN⁽¹⁾, Walter ASSMANN⁽²⁾, Marcel TOULEMONDE⁽³⁾

⁽¹⁾GSI Helmholtzzentrum, and Technische Universität Darmstadt, Germany, ⁽²⁾Ludwig-Maximilians-Universität München, Germany, ⁽³⁾CIMAP (ENSICAEN, CEA, CNRS, Univ. Caen), France

10:30 - 11:00

COFFEE BREAK AM

Chair: Patrick KLUTH

Materials (Bulk): Damage, Tracks - Part II

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| 11:00 - 11:20 | <p>Effects of electronic energy deposition in concentrated solid solution alloys
 Yanwen ZHANG⁽¹⁾, Mohammad W. ULLAH⁽¹⁾, Neila SELLAMI⁽¹⁾, Ritesh SACHAN⁽¹⁾, Ke JIN⁽¹⁾, Aurélien DEBELLE⁽²⁾, Daniel SCHAURIES⁽³⁾, Patrick KLUTH⁽³⁾, Jie LIU⁽⁴⁾, Pengfei ZHAI⁽⁴⁾, Christina TRAUTMAN⁽⁵⁾, German SAMOLYUK⁽¹⁾, Hongbin BEI⁽¹⁾, Hans M. CHRISTEN⁽⁶⁾, Jong K. KEUM⁽⁶⁾, William J. WEBER⁽⁷⁾
 ⁽¹⁾Materials Science and Technology Division, Oak Ridge National Laboratory, United States of America, ⁽²⁾Centre de Sciences Nucléaires et de Sciences de la Matière (CSNSM), Univ. Paris-Sud, France, ⁽³⁾Department of Electronic Materials Engineering, Research School of Physics and Engineering, Australian National University, Australia, ⁽⁴⁾Institute of Modern Physics, Chinese Academy of Sciences, China, ⁽⁵⁾GSI Helmholtzzentrum für Schwerionenforschung GmbH, Planckstrasse 1; Materialwissenschaft, Technische Universität Darmstadt, Germany, ⁽⁶⁾Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, United States of America, ⁽⁷⁾Department of Materials Science and Engineering, University of Tennessee, United States of America</p> | T02.2-O1-8 |
| 11:20 - 11:40 | <p>Radiation tolerance against swift heavy ions: Effect of grain size and irradiation temperature
 Parswajit KALITA⁽¹⁾, Santanu GHOSH⁽¹⁾, Udai SINGH⁽¹⁾, Vinita GROVER⁽²⁾, Pawan KULRIYA⁽³⁾, Gaël SATTONNAY⁽⁴⁾, Devesh AVASTHI⁽⁵⁾
 ⁽¹⁾Department of Physics, Indian Institute of Technology Delhi, India, ⁽²⁾Chemistry Division, Bhabha Atomic Research Centre, India, ⁽³⁾Materials Science Group, Inter-University Accelerator Center, India, ⁽⁴⁾CSNSM, Université Paris-Sud, CNRS, IN2P3, France, ⁽⁵⁾Amity Institute of Nanotechnology, Amity University, India</p> | T02.2-O2-131 |
| 11:40 - 12:00 | <p>Effect of the irradiation temperature on the SHI-induced defect-annealing efficiency in SiC
 Aurélien DEBELLE⁽¹⁾, Lionel THOMÉ⁽¹⁾, Frédérico GARRIDO⁽¹⁾, Isabelle MONNET⁽²⁾, Olli PAKARINEN⁽³⁾, William John WEBER⁽⁴⁾
 ⁽¹⁾CSNSM / Univ. PSud / CNRS, France, ⁽²⁾CIMAP/GANIL, ENSICAEN, France, ⁽³⁾ORNL, United States of America, ⁽⁴⁾University of Tennessee / ORNL, United States of America</p> | T02.2-O3-81 |
| 12:00 - 12:20 | <p>Effect of In concentration on the damage buildup in In_xGa(1-x)N during ion-irradiation
 Tieshan WANG, Shuo ZHANG, Limin ZHANG, Wensi AI, Jinxin PENG
 School of Nuclear Science and Technology, Lanzhou University, China</p> | T02.2-O4-261 |

12:20 - 14:00

TUESDAY LUNCH

Chair: Toshiyuki AZUMA

14:00 - 14:30	Self-organized focusing power in insulating capillaries	INV08-12
INVITED TALK	Eric GIGLIO, Stéphane GUILLOUS <i>Centre de Recherche sur les Ions, les Matériaux et la Photonique (CIMAP), France</i>	

Nanotechnology and Applications, including Capillaries - Part I

14:30 - 14:50	Swift highly-focused ion beams in diamond to create superconducting nanostructures	T04.1-O1-221
	Nuria GORDILLO⁽¹⁾, Rafa JIMÉNEZ-RIOBÓO⁽²⁾, Alicia DE ANDRÉS⁽²⁾, Miguel Ángel RAMOS⁽³⁾, M^a Dolores YNSA⁽³⁾ <i>⁽¹⁾Departamento de Física Aplicada, Universidad Autónoma de Madrid (UAM), Spain and Centro de Micro-Análisis de Materiales, Universidad Autónoma de Madrid (CMAM-UAM), Spain, Spain, ⁽²⁾Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC), Spain, Spain, ⁽³⁾Departamento de Física Aplicada, Universidad Autónoma de Madrid (UAM), Spain, Centro de Micro-Análisis de Materiales, Universidad Autónoma de Madrid (CMAM-UAM), Spain and Instituto Nicolás Cabrera (INC-UAM), Madrid, Spain, Spain</i>	

14:50 - 15:10	Appearance of a new optical absorption peak around the wavelength of 600 nm in silica glass implanted with energetic Ag ions	T04.1-O2-152
	Hiroshi AMEKURA⁽¹⁾, Akihiro IWASE⁽²⁾, Kengo FUKUDA⁽²⁾, Fuminobu HORI⁽²⁾, Yuichi SAITOH⁽³⁾, Satoshi SEMBOSHI⁽⁴⁾ <i>⁽¹⁾National Institute for Materials Science, Japan, ⁽²⁾Osaka Prefecture University, Japan, ⁽³⁾Institutes for Quantum and Radiological Science and Technology, Japan, ⁽⁴⁾Tohoku University, Japan</i>	

Materials (Bulk): Damage, Tracks - Part III

15:10 - 15:30	Phase transformations induced by swift heavy ion irradiations in rare earth sesquioxides	T02.3-O1-33
	Gaël SATTONNAY⁽¹⁾, Suheyli BILGEN⁽¹⁾, Clara GRYGIEL⁽²⁾, Isabelle MONNET⁽²⁾, Patrick SIMON⁽³⁾, Lionel THOMÉ⁽⁴⁾ <i>⁽¹⁾University of Paris Sud, France, ⁽²⁾CIMAP, France, ⁽³⁾CEMHTI, France, ⁽⁴⁾CSNSM, France</i>	

15:30 - 16:00	COFFEE BREAK PM
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16:00 - 18:00	POSTER SESSION #1 <i>details on the poster program</i>
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Chair: Maik LANG

8:30 - 9:00

INVITED TALK

Ion track and hillock structure in the non-overlapping regime. A temperature dependent investigation

INV09-115

Jacques O'CONNELL ⁽¹⁾, Vladimir SKURATOV ⁽²⁾, Ruslan RYMZHANOV ⁽²⁾, Maxim ZDOROVETS ⁽³⁾

⁽¹⁾CHRTEM, South africa, ⁽²⁾FLNR, JINR, Russian federation, ⁽³⁾L.N.Gumilyov Eurasian National University, Kazakhstan

Materials (Bulk): Damage, Tracks - Part IV

9:00 - 9:20

Morphology of etched ion tracks in SiO₂: dependence on ion energy and etching parameters

T02.4-O1-187

Andrea HADLEY ⁽¹⁾, Christian NOTTHOFF ⁽¹⁾, Pablo MOTA-SANTIAGO ⁽¹⁾, Ummehabiba HOSSAIN ⁽¹⁾, Nigel KIRBY ⁽²⁾, Christina TRAUTMANN ⁽³⁾, Maria Eugenia TOIMIL-MOLARES ⁽³⁾, Patrick KLUTH ⁽¹⁾

⁽¹⁾Research School of Physics and Engineering, The Australian National University, Canberra, Australia, ⁽²⁾Australian Synchrotron, ANSTO; 800 Blackburn Rd, Australia, ⁽³⁾GSI Helmholtzzentrum für Schwerionenforschung GmbH, Technische Universität, Germany

9:20 - 9:40

Helium in swift heavy ion irradiated ODS alloys

T02.4-O2-91

Vladimir SKURATOV ⁽¹⁾, Alexander SOHATSKY ⁽¹⁾, Arno JANSE VAN VUUREN ⁽²⁾, Tiep NGUYEN VAN ⁽¹⁾, Jacques O'CONNELL ⁽²⁾, Anel IBRAEVA ⁽³⁾, Maxim ZDOROVETS ⁽³⁾, Srdjan PETROVICH ⁽⁴⁾

⁽¹⁾Flerov Laboratory of Nuclear Reactions, Joint Institute for Nuclear Research, Russian federation, ⁽²⁾CHRTEM, Nelson Mandela University, South africa, ⁽³⁾Astana Branch of Institute of Nuclear Physics, Kazakhstan, ⁽⁴⁾Laboratory of Physics, Vinca Institute of Nuclear Sciences, Serbia

9:40 - 10:10

INVITED TALK

Is a hillock just a protrude part of an ion track?

INV10-236

Norito ISHIKAWA ⁽¹⁾, Tomitsugu TAGUCHI ⁽²⁾, Nariaki OKUBO ⁽¹⁾, Akane KITAMURA ⁽¹⁾

⁽¹⁾Japan Atomic Energy Agency (JAEA), Japan, ⁽²⁾The National Institutes for Quantum and Radiological Science and Technology (QST), Japan

Materials (Bulk): Damage, Tracks - Part IV.

10:10 - 10:30

Characterizing Radiation Effects with Neutron Total Scattering

T02.4-O3-38

Eric O'QUINN ⁽¹⁾, Raul PALOMARES ⁽¹⁾, Will CURETON ⁽¹⁾, Cameron TRACY ⁽²⁾, Joerg NEUEFEIND ⁽³⁾, Christina TRAUTMANN ⁽⁴⁾, Rodney EWING ⁽²⁾, Maik LANG ⁽¹⁾

⁽¹⁾University of Tennessee, United States of America, ⁽²⁾Stanford University, United States of America, ⁽³⁾Oak Ridge National Laboratory, United States of America, ⁽⁴⁾GSI Helmholtzzentrum für Schwerionenforschung, Germany

10:30 - 11:00

COFFEE BREAK AM

Chair: Pedro Luis GRANDE

11:00 - 11:30 Functional defects in 2D materials

INV11-305

INVITED TALK

Marika SCHLEBERGER

Universität Duisburg-Essen, Germany

Surfaces, 2D materials and Emission Phenomena - Part III

11:30 - 11:50 Novel MD study of nanohillock chain formation under grazing angle SHI irradiation

T03.3-01-117

Henrique VAZQUEZ MUIÑOS⁽¹⁾, Marika SCHLEBERGER⁽²⁾, Flyura DJURABEKOVA⁽¹⁾

⁽¹⁾Helsinki Institute of Physics and Physics Department, University of Helsinki, Finland, ⁽²⁾Fakultät für Physik and CENIDE, Universität Duisburg-Essen, Duisburg, Germany, Germany

11:50 - 12:10 Comparison of Si and Ge surface patterns produced by ion irradiation in the reverse epitaxy regime

T03.3-02-242

Stefan FACKO⁽¹⁾, Xin OU⁽²⁾, Martin ENGLER⁽¹⁾, Ricardo DE SCHULTZ⁽¹⁾, Denise ERB⁽¹⁾

⁽¹⁾Institute of Ion Beam Physics and Materials Research, Helmholtz-Zentrum Dresden-Rossendorf, Germany, ⁽²⁾State Key Laboratory of Functional Material for Informatics, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China

12:10 - 12:30 Ion shaping of Au nanoparticles in silica: control of the vertical size using amorphous silicon nitride as a diffusion barrier

T03.3-03-170

Pablo MOTA-SANTIAGO⁽¹⁾, Felipe KREMER⁽²⁾, Giancarlo RIZZA⁽³⁾, Christian DUFOUR⁽⁴⁾, Christian NOTTHOFF⁽¹⁾, Andrea HADLEY⁽¹⁾, U. H. HOSSAIN⁽¹⁾, Patrick KLUTH⁽¹⁾

⁽¹⁾Australian National University, Australia, ⁽²⁾Centre for Advanced Microscopy, Australia, ⁽³⁾Ecole Polytechnique, Laboratoire des Solides Irradiés (LSI) CEA/DSM/IRAMIS, France, ⁽⁴⁾Universite de Caen, CIMAP/CEA/CNRS/ENSICAEN, France

12:30 - 14:00

WEDNESDAY LUNCH

14:00 - 22:00 SOCIAL PROGRAM: OUTING & BANQUET

Chair: Ricardo PAPALEO

8:40 - 9:10

INVITED TALK

Polymers under ionizing radiations: evidences and quantification of energy transfers in presence of particular chemical functions

Muriel FERRY⁽¹⁾, Stephane ESNOUF⁽¹⁾, Emmanuel BALANZAT⁽²⁾, Yvette NGONO-RAVACHE⁽²⁾

⁽¹⁾Den-Service d'Étude du Comportement des Radionucléides (SECR), CEA, Université Paris-Saclay, F-91191, Gif-sur-Yvette, France, France, ⁽²⁾CIMAP (CEA/CNRS/ENSICAEN/UNICAEN), CIMAP site GANIL, Caen, France, France

INV12-4

Radiobiology, Ion beam Therapy, Organics, Polymers – Part I

9:10 - 9:30

Effects induced by electron beam in methane „ices”

Elena SAVCHENKO⁽¹⁾, Ivan KHYZHNIY⁽¹⁾, Sergei UYUTNOV⁽¹⁾, Mikhail BLUDOV⁽¹⁾, Galina GUMENCHUK⁽²⁾, Vladimir BONDYBEY⁽²⁾

⁽¹⁾Institute for Low Temperature Physics & Engineering NASU, Ukraine, ⁽²⁾Lehrstuhl für Physikalische Chemie TUM, Germany

T05.1-O1-102

9:30 - 9:50

PAH destruction by heavy cosmic rays – carbon chains feed production rates

Marin CHABOT⁽¹⁾, Karine BEROFF⁽²⁾, Emmanuel DARTOIS⁽²⁾, Thomas PINO⁽²⁾, Marie GODARD⁽³⁾

⁽¹⁾Institut de Physique Nucléaire d'Orsay (IPNO), CNRS-IN2P3, Univ. Paris Sud, Université Paris-Saclay, F-91406 Orsay, France, ⁽²⁾Institut des Sciences Moléculaires d'Orsay (ISMO), CNRS, Univ. Paris Sud, Université Paris-Saclay, F-91405 Orsay, France, ⁽³⁾Centre de Sciences Nucléaires et de Sciences de la Matière (CSNSM), CNRS-IN2P3, Univ. Paris Sud, Université Paris-Saclay, F-91405 Orsay, France

T05.1-O2-54

9:50 - 10:10

Cosmic ray effects in astrophysical ices: formation and radioresistance of complex organic molecules

Alicja DOMARACKA⁽¹⁾, Gabriel SILVA VIGNOLI MUNIZ⁽¹⁾, Aditya AGNIHOTRI⁽¹⁾, Basil AUGÉ⁽²⁾, Christian MEJÍA⁽³⁾, Rafael MARTINEZ⁽⁴⁾, Hermann ROTHARD⁽¹⁾, Philippe BODUCH⁽¹⁾

⁽¹⁾Centre de Recherche sur les Ions, les Matériaux et la Photonique, Normandie Univ, ENSICAEN, UNICAEN, CEA, CNRS, CIMAP, France, ⁽²⁾Centre de Sciences Nucléaires et de Sciences de la Matière, UMR 8609 CNRS/IN2P3-Univ. Paris-Sud, Université Paris-Saclay, Orsay (France); Centre de Recherche sur les Ions, les Matériaux et la Photonique, Normandie Univ, ENSICAEN, UNICAEN, CEA, CNRS, CIMAP, France, ⁽³⁾Faculty of Chemical Sciences, Universidad de Cuenca, Cuenca (Ecuador); Departamento de Física, Pontificia Universidade Católica do Rio de Janeiro (Brazil); Centre de Recherche sur les Ions, les Matériaux et la Photonique, Normandie Univ, ENSICAEN, UNICAEN, CEA, CNRS, CIMAP, France, ⁽⁴⁾Departamento de Física, Universidade Federal do Amapá, Macapá (Brazil); Centre de Recherche sur les Ions, les Matériaux et la Photonique, Normandie Univ, ENSICAEN, UNICAEN, CEA, CNRS, CIMAP, France

T05.1-O3-67

10:10 - 10:30

Elastic and inelastic interactions of high energy cosmic protons with on-board spacecraft electronics

Nikolay CHECHENIN, Tatiana CHUVILSKAYA, Alla SHIROKOVA

Lomonosov Moscow State University, Skobeltsyn Institute of Nuclear Physics, Russian federation

T05.1-O4-234

10:30 - 11:00

COFFEE BREAK AM

Chair: Maria Eugenia TOIMIL-MOLARES

11:00 - 11:30	Controlled fabrication of Ion track-based nanostructures with tuned plasmonic and electric properties Jinglai DUAN, Jie LIU, Huijun YAO, Dan MO, Youmei SUN, Yonghui CHEN, K. MAAZ, Shuangbao LYU, Cong ZHAO, Kejing HUANG, Hongwei CHENG, Mindong HOU <i>Institute of Modern Physics, CAS, China</i>	INV13-75
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INVITED TALK

Nanotechnology and Applications, including Capillaries - Part II

11:30 - 11:50	Nano-porosity in GaSb and InSb prepared by swift heavy-ion irradiation Christian NOTTHOFF⁽¹⁾, Pablo MOTA-SANTIAGO⁽¹⁾, Andrea HADLEY⁽¹⁾, U Habiba HOSSAIN⁽¹⁾, Nigel KIRBY⁽²⁾, Peter KAPPEN⁽²⁾, Patrick KLUTH⁽¹⁾ <i>⁽¹⁾Research School of Physics and Engineering, The Australian National University, Australia, ⁽²⁾Australian Synchrotron, ANSTO; 800 Blackburn Road, Australia</i>	T04.2-O1-141
11:50 - 12:10	Ion-induced nanopatterning of crystalline surfaces for applications in bottom-up nanostructure fabrication Denise ERB⁽¹⁾, René HÜBNER⁽¹⁾, Gerald MALSCH⁽²⁾, Ricardo DE SCHULTZ⁽¹⁾, Jörg GRENZER⁽¹⁾, Kilian LENZ⁽¹⁾, Jürgen LINDNER⁽¹⁾, Stefan FACSKO⁽¹⁾ <i>⁽¹⁾Helmholtz-Zentrum Dresden, Rossendorf, Germany, ⁽²⁾Technische Universität Dresden, Germany</i>	T04.2-O2-122
12:10 - 12:30	Ion-track technologie for the fabrication of Bi _(1-x) Sb _x nanowire networks for thermoelectric applications Michael WAGNER <i>GSI Helmholtzzentrum für Schwerionenforschung, Germany</i>	T04.2-O3-281

12:30 - 14:00

THURSDAY LUNCH

Chair: Platon KARASEOV

14:00 - 14:30 Radiation defect dynamics in solids studied by pulsed ion beams INV14-130
INVITED TALK Sergei KUCHEYEV
Lawrence Livermore National Laboratory, United States of America

Materials (Bulk): Damage, Tracks - Part V

14:30 - 14:50 Photothermal radiometry study of heavy ion beam induced modification of polycrystalline graphite thermal properties T02.5-O1-265
Alexey PROSVETOV⁽¹⁾, **Georges HAMAOU**⁽²⁾, **Nicolas HORNY**⁽²⁾, **Mihai CHIRTOC**⁽²⁾, **Florent YANG**⁽³⁾, **Christina TRAUTMANN**⁽¹⁾, **Marilena TOMUT**⁽³⁾
⁽¹⁾Materials Research Department, GSI Helmholtz Center of Heavy Ion Research, Planckstr. 1, 64291 Darmstadt, Germany; Department of Materials and Earth Sciences, Technical University of Darmstadt, Alarich-Weiss-Straße 2, 64287 Darmstadt, Germany, Germany, ⁽²⁾Multiscale Thermophysics Lab., GRESPI, Université de Reims Champagne-Ardenne URCA, Moulin de la Housse BP 1039, 51687 Reims, France, France, ⁽³⁾Materials Research Department, GSI Helmholtz Center of Heavy Ion Research, Planckstr. 1, 64291 Darmstadt, Germany, Germany

14:50 - 15:10 Thermal annealing of calcium fluoride crystals irradiated with swift heavy ions: Optical absorption, Raman scattering and luminescence T02.5-O2-196
Igor ALENCAR⁽¹⁾, **Pedro Luis GRANDE**⁽¹⁾, **Marcelo Barbalho PEREIRA**⁽¹⁾, **Shiguo WATANABE**⁽²⁾, **Björn WINKLER**⁽³⁾, **Kurt SCHWARTZ**⁽⁴⁾, **Christina TRAUTMANN**⁽⁴⁾
⁽¹⁾Universidade Federal do Rio Grande do Sul, Brazil, ⁽²⁾Universidade de São Paulo, Brazil, ⁽³⁾Johann Wolfgang Goethe Universität, Germany, ⁽⁴⁾Helmholtzzentrum für Schwerionenforschung, Germany

15:10 - 15:30 Optimisation of giant magnetocaloric materials with ion irradiation T02.5-O3-121
Martino TRASSINELLI⁽¹⁾, **Sophie CERVERA**⁽¹⁾, **Andras BARTOK**⁽²⁾, **Cécile CARRÉTERO**⁽³⁾, **Mahmoud EDDRIEF**⁽¹⁾, **Etgens VICTOR**⁽²⁾, **Vincent GARCIA**⁽³⁾, **Eric JACQUET**⁽³⁾, **Emily LAMOUR**⁽¹⁾, **Martino LO BUE**⁽²⁾, **Anna LÉVY**⁽¹⁾, **Frédéric MAZALEYRAT**⁽²⁾, **Stéphane MACÉ**⁽¹⁾, **Alexandre PASKO**⁽²⁾, **Christophe PRIGENT**⁽¹⁾, **Sébastien STEYDLI**⁽¹⁾, **Massimiliano MARANGOLO**⁽¹⁾, **Dominique VERNHET**⁽¹⁾
⁽¹⁾Institut des NanoSciences de Paris, INSP, CNRS, Sorbonne Université, F-75252 Paris, France, France, ⁽²⁾SATIE, ENS Cachan, CNRS, Université Paris-Saclay, F-94230 Cachan, France, France, ⁽³⁾Unité Mixte de Physique, CNRS, Thales, Univ. Paris-Sud, Université Paris-Saclay, 91767, Palaiseau, France, France

15:30 - 16:00 COFFEE BREAK PM

16:00 - 18:00 **POSTER SESSION #2**
details on the poster program

Friday 6 July

Chair: John O'CONNOR

8:30 - 9:00	Transport of convoy electrons in solid under fast molecular ion penetration Shigeo TOMITA ⁽¹⁾ , Yoko SHIINA ⁽¹⁾ , Ryo KINOSHITA ⁽¹⁾ , Makoto IMAI ⁽²⁾ , Kiyoshi KAWATSURA ⁽³⁾ , Makoto MATSUDA ⁽⁴⁾ , Kimikazu SASA ⁽⁵⁾ , Masao SATAKA ⁽⁵⁾ ⁽¹⁾ <i>Institute of Applied Physics, University of Tsukuba, Japan,</i> ⁽²⁾ <i>Department of Nuclear Engineering, Kyoto University, Japan,</i> ⁽³⁾ <i>Theoretical Radiation Research Laboratory, Japan,</i> ⁽⁴⁾ <i>Nuclear Science Research Institute, Japan Atomic Energy Agency, Japan,</i> ⁽⁵⁾ <i>Tandem Accelerator Complex, University of Tsukuba, Japan</i>	INV15-109
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Basic processes (atomic collisions, scattering, stopping) - Part II

9:00 - 9:20	Reciprocity Analysis of Electronic Stopping of Slow Ions Peter SIGMUND ⁽¹⁾ , Valery KUZMIN ⁽²⁾ , Andreas SCHINNER ⁽³⁾ ⁽¹⁾ <i>University of Southern Denmark, Denmark,</i> ⁽²⁾ <i>Joint Institute of Nuclear Research, Russian federation,</i> ⁽³⁾ <i>Johannes Kepler University, Austria</i>	T01.2-01-82
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9:20 - 9:40	New Insight in the importance of quasi-resonant charge transfer in Low Energy Ion Scattering ⁽¹⁾ LEIS Hidde BRONGERSMA ⁽¹⁾ , Andrey ZAMESHIN ⁽²⁾ , Andrey YAKSHIN ⁽²⁾ , Marko STURM ⁽²⁾ , Philipp BRÜNER ⁽¹⁾ ⁽¹⁾ <i>IONTOF GmbH, Germany,</i> ⁽²⁾ <i>Industrial Focus Group XUV Optics, MESA+, University of Twente, Netherlands</i>	T01.2-02-93
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9:40 - 10:00	Matrix effects involving quasis resonant neutralization from valence band in Low Energy Ion Scattering Andrey ZAMESHIN, Andrey YAKSHIN, Marko STURM, Cristiane STILHANO VILAS BOAS, Fred BIJKERK <i>XUV Optics Group, University of Twente, Netherlands</i>	T01.2-03-190
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10:00 - 10:20	Acoustic detection of energetic heavy ions Walter ASSMANN ⁽¹⁾ , Sebastian LEHRACK ⁽¹⁾ , Marcus BENDER ⁽²⁾ , Rong YANG ⁽¹⁾ , Daniel HAFFA ⁽¹⁾ , Jörg SCHREIBER ⁽¹⁾ , Christina TRAUTMANN ⁽²⁾ , Katia PARODI ⁽¹⁾ ⁽¹⁾ <i>Department for Medical Physics, LMU München, Germany,</i> ⁽²⁾ <i>GSI-Helmholtzzentrum für Schwerionenforschung, Germany</i>	T01.2-04-15
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10:20 - 11:00	COFFEE BREAK AM
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Chair: Christina TRAUTMANN

11:00 - 11:30 Radiobiology at GANIL: a CIMAP experience INV16-334
INVITED TALK Yannick SAINTIGNY, Siamak HAGHDOOST, François CHEVALIER, Florent DURANTEL
 LARIA, CIMAP, France

Radiobiology, Ion beam Therapy, Organics, Polymers - Part II

11:30 - 11:50 TILDA-V: a full-differential Monte Carlo code for proton and alpha particle tracking in a realistic biological environment T05.2-O1-254
Mario Enrique ALCOCER AVILA ⁽¹⁾, **Christophe CHAMPION** ⁽¹⁾, **Michele Arcangelo QUINTO** ⁽²⁾, **Juan Manuel MONTI** ⁽²⁾, **Omar Ariel FOJON** ⁽²⁾, **Roberto Daniel RIVAROLA** ⁽²⁾, **Philippe WECK** ⁽³⁾
⁽¹⁾CELIA, Bordeaux University, France, ⁽²⁾Instituto de Física Rosario, CONICET, Universidad Nacional de Rosario, Argentina, ⁽³⁾Sandia National Laboratories, United States of America

11:50 - 12:10 Irradiation of isolated collagen triple helix models by ionizing photon and ion beams T05.2-O2-277
Mathieu LALANDE ⁽¹⁾, **Marwa ABDELMOULEH** ⁽¹⁾, **Lucas SCHWOB** ⁽²⁾, **Fabien CHIROT** ⁽³⁾, **Alain MERY** ⁽¹⁾, **Jimmy RANGAMA** ⁽¹⁾, **Violaine VIZCAINO** ⁽¹⁾, **Philippe DUGOURD** ⁽³⁾, **Thomas SCHLATHÖLTER** ⁽⁴⁾, **Jean-Christophe POULLY** ⁽¹⁾
⁽¹⁾CIMAP, France, ⁽²⁾DESY, Germany, ⁽³⁾ILM, France, ⁽⁴⁾ZIAM, Netherlands

12:10 - 12:30 A chemical origin for the isotopic heterogeneities found in extraterrestrial organic matter T05.2-O3-149
Basile AUGÉ ⁽¹⁾, **Emmanuel DARTOIS** ⁽²⁾, **Jean DUPRAT** ⁽¹⁾, **Ting Di WU** ⁽³⁾, **Jean Luc GUERQUIN-KERN** ⁽³⁾, **Philippe BODUCH** ⁽⁴⁾, **Adithya AGNIHOTRI** ⁽⁴⁾, **Hermann ROTHARD** ⁽⁴⁾
⁽¹⁾Centre de Sciences Nucléaires et de Sciences de la Matière, Université Paris Sud, UMR 8609-CNRS/IN2P3, France, ⁽²⁾Institut des Sciences Moléculaires d'Orsay, Université Paris Sud, UMR 8609-CNRS/IN2P3, France, ⁽³⁾Institut Curie, PSL Research University, INSERM, U1196, France, ⁽⁴⁾Centre de Recherche sur les Ions, les Matériaux et la Photonique, Normandie Univ, ENSICAEN, UNICAEN, CEA, CNRS, CIMAP, France

12:30 - 13:00 CLOSING CEREMONY

13:00 - 14:30 FRIDAY LUNCH

14:30 - 16:00 VISIT OF THE GANIL LAB.

POSTER PROGRAM

Poster session #1

- Reconstruction of the atom-surface potential using rainbow scattering data P1-T01-16
Aleksandr ZINOVEV, Pavel BABENKO, Daria MELUZOVA, Andrei SHERGIN
Ioffe Institute, Russian federation
- Contribution of molecular orbital promotion to inelastic energy losses in ion-solids collisions P1-T01-17
Aleksandr ZINOVEV, Pavel BABENKO, Daria MELUZOVA, Andrei SHERGIN
Ioffe Institute, Russian federation
- Anomalous reduction of energy deposition by heavy ions near incident surface P1-T01-22
Norito ISHIKAWA, Tatsuhiko OGAWA, Takeshi KAI
Japan Atomic Energy Agency, Japan
- Effective charge parameter for Li, C and O ions in Aluminum, silver, gold, polypropylene and Makrofol foils P1-T01-34
Samira OURABAH⁽¹⁾, Mamoun CHEKIRINE⁽²⁾, Boualem BOUZID⁽³⁾, Rachid KHELIFI⁽²⁾
⁽¹⁾Ecole Supérieure en Sciences Appliquées Alger, Algeria, ⁽²⁾LPTHIRM, Faculté des sciences, Université Saad Dahlab, Algeria, ⁽³⁾Faculté de physique, Université des sciences et de la technologie Houari-Boumédiène, Algeria
- Interatomic Coulombic Decay: The Mechanism for Rapid Deexcitation of Hollow Atoms P1-T01-36
Richard WILHELM⁽¹⁾, Sascha CREUTZBURG⁽²⁾, Janine SCHWESTKA⁽¹⁾, Elisabeth GRUBER⁽³⁾, Teresa MADEIRA⁽⁴⁾, José MARQUES⁽⁵⁾, Jacek KOBUS⁽⁶⁾, Arkady KRASHENINNIKOV⁽²⁾, Friedrich AUMAYR⁽¹⁾
⁽¹⁾TU Wien, Institute of Applied Physics, Austria, ⁽²⁾Helmholtz-Zentrum Dresden-Rossendorf, Institute of Ion Beam Physics and Materials Research, Germany, ⁽³⁾Aarhus University, Department of Physics and Astronomy, Denmark, ⁽⁴⁾TU Chemnitz, Semiconductor Physics, Germany, ⁽⁵⁾Universidade de Lisboa, BioISI—Biosystems & Integrative Sciences Institute, Portugal, ⁽⁶⁾Nicolaus Copernicus University, Faculty of Physics, Astronomy and Informatics, Poland
- Fragmentation of the ethane molecules induced by MeV-energy proton bombardment P1-T01-37
Sándor KOVÁCS, Sándor DEMES, Péter HERCZKU, Zoltán JUHÁSZ, Béla SULIK
Institute for Nuclear Research, Hungarian Academy of Sciences (MTA Atomki), Hungary
- Expanded PASS Stopping Code P1-T01-39
Peter SIGMUND⁽¹⁾, Andreas SCHINNER⁽²⁾, Valery KUZMIN⁽³⁾
⁽¹⁾University of Southern Denmark, Denmark, ⁽²⁾Joh. Kepler University, Austria, ⁽³⁾Joint Institute of Nuclear Research, Russian federation
- Reflection of hydrogen and deuterium atoms from the surface of carbon and polycrystalline beryllium and tungsten P1-T01-45
Aleksandr ZINOVEV⁽¹⁾, Daria MELUZOVA⁽¹⁾, Pavel BABENKO⁽¹⁾, Andrei SHERGIN⁽¹⁾, Kai NORDLUND⁽²⁾
⁽¹⁾Ioffe Institute, Russian federation, ⁽²⁾University of Helsinki, Finland
- Fragmentation of water and methane induced by MeV-energy singly charged projectiles P1-T01-52
Sándor KOVÁCS, Péter HERCZKU, Zoltán JUHÁSZ, László SARKADI, László GULYÁS, Béla SULIK
Institute for Nuclear Research, Hungarian Academy of Sciences (MTA Atomki), Hungary

Electron-impact ionizations in dense plasmas including the renormalization screening **P1-T01-58**
Myoung-Jae LEE, Young-Dae JUNG
Hanyang University, Korea, republic of

On the impact of crystallinity on the energy loss of medium energy H and He ions in V and Fe **P1-T01-66**
Mauricio SORTICA, Barbara BRUCKNER, Vassilios KAPAKLIS, Marcos MORO, Daniel PRIMETZHOFFER
Department of Physics and Astronomy, Uppsala University, Sweden

The impact of scattering potential and electronic stopping on the spectrum shape in Medium Energy Ion Scattering **P1-T01-79**
Daniel PRIMETZHOFFER⁽¹⁾, Barbara BRUCKNER⁽¹⁾, Tomas STRAPKO⁽¹⁾, Peter BAUER⁽²⁾
⁽¹⁾Department of Physics and Astronomy, Uppsala University, Sweden, ⁽²⁾Institute of Experimental Physics, Johannes Kepler University Linz, Austria

Analysis of the energy dependent ion yield of keV He ions scattered from metals with and without surface oxides **P1-T01-80**
Barbara BRUCKNER⁽¹⁾, Daniel PRIMETZHOFFER⁽²⁾, Peter BAUER⁽¹⁾
⁽¹⁾Institute of Experimental Physics, Johannes Kepler University Linz, Austria, ⁽²⁾Department of Physics and Astronomy, Uppsala University, Sweden

Experimental study of electronic stopping of light ions in transition and rare-earth metals at velocities around the stopping maximum **P1-T01-94**
Marcos MORO⁽¹⁾, Barbara BRUCKNER⁽¹⁾, Peter BAUER⁽²⁾, Daniel PRIMETZHOFFER⁽¹⁾
⁽¹⁾Department of Physics and Astronomy, Uppsala University, Box 516, 751 20, Sweden, ⁽²⁾Atomic Physics and Surface Science, Johannes Kepler University, A-4040, Austria

Energy-loss straggling of protons in monocarbides obtained by elastic resonant backscattering **P1-T01-128**
Mitsuo TOSAKI, Yasuhito ISOZUMI
Kyoto University, Japan

Investigation of the energy loss of heavy ions in noble metals at energies below the Bragg peak **P1-T01-135**
Karim Alexandros KANTRE, Valentina PANETA, Daniel PRIMETZHOFFER
Ion Physics, Dept. of Physics and Astronomy, Uppsala University, P.O. Box 516, SE 751 20, Sweden

Fully relativistic structure calculations of heavy targets for inelastic collisions **P1-T01-136**
Claudia MONTANARI, Alejandra MENDEZ, Dario MITNIK
Instituto de Astronomía y Física del Espacio, CONICET and University of Buenos Aires, Argentina

L shell ionization cross sections in relativistic atoms by swift heavy ions **P1-T01-147**
Claudia MONTANARI⁽¹⁾, Alejandra MENDEZ⁽¹⁾, Darío MITNIK⁽¹⁾, Udai SINGH⁽²⁾, Mumtaz OSWAL⁽³⁾, Sunil KUMAR⁽²⁾, Gurjeets SINGH⁽⁴⁾, D MEHTA⁽⁴⁾, K.P. SINGH⁽⁴⁾, Tapan NANDI⁽⁵⁾
⁽¹⁾Instituto de Astronomía y Física del Espacio, CONICET and Universidad de Buenos Aires, Argentina, ⁽²⁾Department of Applied Sciences, Chitkara University, India, ⁽³⁾Department of Physics, Dev Samaj College, India, ⁽⁴⁾Department of Physics, Panjab University, India, ⁽⁵⁾Inter-University Accelerator Centre, India

Zirconium Stopping Power for Partially Stripped Projectiles in 0.1-1 MeV/u energy domain **P1-T01-158**
C.A. PINEDA-VARGAS⁽¹⁾, Abdelkader GUESMIA⁽²⁾
⁽¹⁾iThemba Labs, National Research Foundation, South africa, ⁽²⁾University of Saad Dahlab, Algeria

Application of Doppler-broadening spectroscopy for the characterization of damage induced in SiO₂ by 2 MeV Au²⁺ implantation P1-T01-160

Oscar G DE LUCIO MORALES, Miguel PÉREZ-FLORES

Instituto de Física, Universidad Nacional Autónoma de México, Apartado Postal 20-364, 01000 Cd. Mx., México, Mexico

Stereoscopic collisions of MeV molecular ion with atom and molecule P1-T01-165

Misaki MASATSUGU⁽¹⁾, Kunikazu ISHII⁽²⁾, Hidemi OGAWA⁽²⁾

⁽¹⁾Graduate school of Humanities and Sciences, Nara Women's University, Japan, ⁽²⁾Department of Physics, Nara Women's University, Japan

Anisotropy of Electronic Stopping Power in Graphite P1-T01-181

Jessica HALLIDAY⁽¹⁾, Emilio ARTACHO⁽¹⁾, Rafi ULLAH⁽²⁾

⁽¹⁾Theory of Condensed Matter, Cavendish Laboratory, University of Cambridge, United Kingdom, ⁽²⁾CIC nanoGUNE, Ave. Tolosa 76, Spain

New insights of molecular (H₂⁺) ion channeling phenomenon in ultra-thin Si membranes P1-T01-219

Raul FADANELLI⁽¹⁾, Mallikarjuna Rao MOTAPOTHULA⁽²⁾, Mark B. H. BREESE⁽³⁾

⁽¹⁾Ion Implantation Laboratory, Physics Institute, Universidade Federal do Rio Grande do Sul, Brazil, ⁽²⁾Department of Physics and Astronomy, Ion Physics Group, Applied Nuclear Physics, Uppsala University, Sweden, ⁽³⁾Singapore Synchrotron Light Source (SSLS) and Center for Ion Beam Applications, Physics Department, National University of Singapore, Singapore

TD-DFT simulations of proton irradiation of water ice: technical challenges P1-T01-262

Daniel MUÑOZ-SANTIBURCIO, Emilio ARTACHO

CIC nanoGUNE, Spain

Ionization and electron capture total cross sections for biological molecules impacted by ions P1-T01-264

Mario Enrique ALCOCER AVILA⁽¹⁾, Christophe CHAMPION⁽¹⁾, Michele Arcangelo QUINTO⁽²⁾, Juan Manuel MONTI⁽²⁾, Omar Ariel FOJON⁽²⁾, Philippe WECK⁽³⁾, Roberto Daniel RIVAROLA⁽²⁾

⁽¹⁾CELIA, Bordeaux University, France, ⁽²⁾Instituto de Física Rosario, CONICET, Universidad Nacional de Rosario, Argentina, ⁽³⁾Sandia National Laboratories, United States of America

Defects in swift heavy ion irradiated n-4HfSiC P1-T02-3

Shandirai TUNHUMA, Thulani HLATSHWAYO, Mmantsae DIALE, Jacqueline NEL, Francois AURET

University of Pretoria, South Africa

A molecular dynamics study on helium bubble growth in tungsten under strain fields P1-T02-9

Minghuan CUI, Ning GAO, Zhiguang WANG

Institute of Modern Physics, Chinese Academy of Sciences, China

Ion irradiation effects in antimonide films P1-T02-13

Raquel GIULIAN, Charles A. BOLZAN, Danay J. MANZO, Victor C. VIANA, Bruno FAGHERAZZI, Julio C. ROHR, Fabiano BERNARDI, Antônio M. H. De ANDRADE, Daniel L. BAPTISTA, Paulo F. P. FICHTNER, Rita M. C. De ALMEIDA, Gilberto L. THOMAS

Universidade Federal do Rio Grande do Sul, Brazil

Defect kinetics in lithium fluoride crystals irradiating with swift ions at room temperature P1-T02-32

Michael SOROKIN⁽¹⁾, Kurt SCHWARTZ⁽²⁾, Vladimir DUBINKO⁽³⁾, Anatole KHODAN⁽⁴⁾, Alma DAULETBEKOVA⁽⁵⁾

⁽¹⁾National Research Centre 'Kurchatov Institute', Russian Federation, ⁽²⁾GSI Helmholtzzentrum für Schwerionenforschung, Germany, ⁽³⁾National Science Center 'Kharkov Institute of Physics and Technology', Ukraine, ⁽⁴⁾A.N.Frumkin Institute of Physical Chemistry and Electrochemistry RAS, Russian Federation, ⁽⁵⁾L.N.Gumilyov Eurasian National University, Kazakhstan

a methodological study on molecular dynamics for high energy collision cascades in tungsten **P1-T02-41**
Jiechao CUI, Min LI, Baoqin FU, Qing HOU

Key Lab for Radiation Physics and Technology, Ministry of Education; Institute of Nuclear Science and Technology, Sichuan University,, China

Damage formation and optical activation in Er implanted m-plane and a-plane ZnO **P1-T02-42**
Adela JAGEROVA⁽¹⁾, Anna MACKOVA⁽¹⁾, Petr MALINSKY⁽¹⁾, Romana MIKSOVA⁽¹⁾, Zdenek SOFER⁽²⁾, Roman BÖTTGER⁽³⁾, Katerina KLIMOVA⁽²⁾, Jiri OSWALD⁽⁴⁾

⁽¹⁾Nuclear Physics Institute of the Czech Academy of Sciences, v. v. i., 250 68, Czech republic, ⁽²⁾Department of Inorganic Chemistry, Institute of Chemical Technology, 166 28, Czech republic, ⁽³⁾Institute of Ion Beam Physics and Materials Research, Helmholtz Zentrum Dresden-Rossendorf, 01328, Germany, ⁽⁴⁾Institute of Physics of the Czech Academy of Sciences, Cukrovarnicka 10/112, 162 00, Czech republic

High energy helium implantation for evolution of microstructural changes of nickel based alloy **P1-T02-44**
Hyung-Ha JIN, I Seul RYU, Gyeong Geon LEE, Junhyun KWON

Korea Atomic Energy Research Institute, Korea, republic of

Effect of vacancy defects or cavities induced by ion implantation on rare gas diffusion in uranium dioxide **P1-T02-46**

Marie GERARDIN⁽¹⁾, Eric GILABERT⁽²⁾, Denis HORLAIT⁽²⁾, Marie-France BARTHE⁽³⁾, Pierre DESGARDIN⁽³⁾, Gaëlle CARLOT⁽¹⁾, Catherine SABATHIER⁽¹⁾

⁽¹⁾CEA Cadarache, France, ⁽²⁾CENBG, France, ⁽³⁾CEMHTI, France

Track size dependence on the velocity of swift heavy ions in Mg₂SiO₄ **P1-T02-53**
Ruslan RYMZHANOV⁽¹⁾, Sergey GORBUNOV⁽²⁾, Nikita MEDVEDEV⁽³⁾, Alexander VOLKOV⁽⁴⁾

⁽¹⁾Joint Institute for Nuclear Research, Russian federation, ⁽²⁾P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Russian federation, ⁽³⁾Institute of Physics, Czech Academy of Sciences; Institute of Plasma Physics, Czech Academy of Sciences, Czech republic, ⁽⁴⁾Joint Institute for Nuclear Research; NRC 'Kurchatov Institute', Russian federation

Swift heavy ion track in single crystal rutile: Experiments and inelastic thermal-spike analysis **P1-T02-63**
Pengfei ZHAI⁽¹⁾, Jie LIU⁽¹⁾, Shuai NAN⁽²⁾, Lijun XU⁽¹⁾, Weixing LI⁽²⁾

⁽¹⁾Institute of Modern Physics, Chinese Academy of Sciences, China, ⁽²⁾CAS Center for Excellence in Tibetan Plateau Earth Sciences, and Key Laboratory of Continental Collision and Plateau Uplift, Institute of Tibetan Plateau Research, Chinese Academy of Sciences, China

Structural and optical properties in yttria-stabilized zirconia modified by Si⁺-implanted ions **P1-T02-71**
Romana MIKSOVA⁽¹⁾, Anna MACKOVA⁽¹⁾, Adela JAGEROVA⁽¹⁾, Petr MALINSKY⁽¹⁾, Zdenek SOFER⁽²⁾, Václav HOLÝ⁽³⁾, Ondrej CAHA⁽⁴⁾

⁽¹⁾Nuclear Physics Institute of the CAS, v. v. i., Czech republic, ⁽²⁾Department of Inorganic Chemistry, Institute of Chemical Technology, Czech republic, ⁽³⁾Department of Condensed Matter, Faculty of Mathematics and Physics, Czech republic, ⁽⁴⁾CEITEC at Masaryk University, Czech republic

Investigations of cation disordering in magnesium aluminate spinel induced by SHI using X-ray absorption near edge structure and first-principles calculations **P1-T02-83**

Satoru YOSHIOKA⁽¹⁾, Konosuke TSURUTA⁽¹⁾, Tomokazu YAMAMOTO⁽¹⁾, Kazuhiro YASUDA⁽¹⁾, Syo MATSUMURA⁽¹⁾, Norito ISHIKAWA⁽²⁾, Eiichi KOBAYASHI⁽³⁾

⁽¹⁾Kyushu University, Japan, ⁽²⁾Japan Atomic Energy Agency, Japan, ⁽³⁾Kyushu Synchrotron Light Research Center, Japan

Molecular dynamics simulation studies of displacement cascade induced defects in gold nanotubes **P1-T02-84**

Wenqiang LIU, Jinglai DUAN, Yonghui CHEN, Jie LIU

Institute of Modern Physics, Chinese Academy of Science, China

Atomic and electronic properties of Al₂O₃ and diamond under intense excitation of the electronic system

P1-T02-87

Roman VORONKOV⁽¹⁾, Fedor AKHMETOV⁽²⁾, Sergey IVLIEV⁽²⁾, Nikita MEDVEDEV⁽³⁾, Alexander VOLKOV⁽⁴⁾

⁽¹⁾P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Leninskij pr., 53, 119991 Moscow, Russia, Russian federation, ⁽²⁾National Research Nuclear University MEPhI, Kashirskoye sh., 31, 115409 Moscow, Russia, Russian federation, ⁽³⁾Institute of Physics, Czech Academy of Sciences, Na Slovance 2, 182 21 Prague 8, Czech Republic; Institute of Plasma Physics, Czech Academy of Sciences, Za Slovankou 3, 182 00 Prague 8, Czech Republic, Czech republic, ⁽⁴⁾P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Leninskij pr., 53, 119991 Moscow, Russia; Joint Institute for Nuclear Research, Joliot-Curie 6, 141980 Dubna, Moscow Region, Russia; National Research Center 'Kurchatov Institute', Kurchatov Sq. 1, 123182 Moscow, Russia, Russian federation

Effect of the electronic kinetics on graphitization of diamond irradiated with swift heavy ions and fs-lasers

P1-T02-88

Alexander E. VOLKOV⁽¹⁾, Alexey GIPPIUS⁽²⁾, Sergey GORBUNOV⁽²⁾, Roman KHMELNITSKI⁽²⁾, Vitaliy KONONENKO⁽³⁾, Jacques O' CONNEL⁽⁴⁾, Vladimir SKURATOV⁽⁵⁾, Gennadiy SYRYKH⁽⁶⁾

⁽¹⁾National Research Center 'Kurchatov Institute', Kurchatov Sq. 1, 123182 Moscow, Russia; P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Leninskij pr. 53, 119991 Moscow, Russia; Joint Institute for Nuclear Research, Joliot-Curie 6, 141980 Dubna, Moscow Region, Russia, Russian federation, ⁽²⁾P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Leninskij pr. 53, 119991 Moscow, Russia, Russian federation, ⁽³⁾Prokhorov General Physics Institute, Vavilova 38, 119991 Moscow, Russia, Russian federation, ⁽⁴⁾Nelson Mandela Metropolitan University, University way, Summerstrand, 6001 Port Elizabeth, South Africa, Russian federation, ⁽⁵⁾Joint Institute for Nuclear Research, Joliot-Curie 6, 141980 Dubna, Moscow Region, Russia; National Research Nuclear University MEPhI, Kashirskoye sh., 31, 115409 Moscow, Russia; Dubna State University, Universitetskay 19, 141980 Dubna, Moscow Region, Russia, Russian federation, ⁽⁶⁾National Research Center 'Kurchatov Institute', Kurchatov Sq. 1, 123182 Moscow, Russia, Russian federation

Depth resolved chemical activation and etching of swift heavy ion tracks in olivine

P1-T02-89

Sergey GORBUNOV⁽¹⁾, Ruslan RYMZHANOV⁽²⁾, Alexander VOLKOV⁽³⁾

⁽¹⁾P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Leninskij pr. 53, 119991 Moscow, Russia, Russian federation, ⁽²⁾Joint Institute for Nuclear Research, Joliot-Curie 6, 141980 Dubna, Moscow Region, Russia; Russian federation, ⁽³⁾National Research Center 'Kurchatov Institute', Kurchatov Sq. 1, 123182 Moscow, Russia; P. N. Lebedev Physical Institute of the Russian Academy of Sciences, Leninskij pr. 53, 119991 Moscow, Russia; Joint Institute for Nuclear Research, Joliot-Curie 6, 141980 Dubna, Moscow Region, Russia; Russian federation

The Influence of Stopping Power and Temperature on Latent Track Formation in YAP and YAG

P1-T02-90

Arno JANSE VAN VUUREN⁽¹⁾, Vladimir SKURATOV⁽²⁾, Jacques O'CONNELL⁽¹⁾, Maxim SAIFULIN⁽²⁾, Gul'nara ARALBAYEVA⁽³⁾, Alma DAULETBEKOVA⁽³⁾, Maxim ZDOROVETS⁽⁴⁾

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Grain Size Effects on Irradiated CeO₂, ThO₂, and UO₂

P1-T02-96

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Ion beam induced damage in nanostructured ZrN film

P1-T02-108

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Structural modifications induced in GaN/Al₂O₃ under swift heavy ions

P1-T02-111

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TEM investigations of structural and chemical order in III-N semiconductors irradiated by swift heavy ion

P1-T02-112

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Recrystallization role in ion track formation in dielectrics

P1-T02-116

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Swift heavy ion-irradiated calcite (CaCO₃) analyzed by UV-C Laser excited Fluorescence-Spectrometry

P1-T02-120

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Swift heavy ion induced lattice defects in apatite (Ca₅(PO₄)₃(OH,F,Cl)) using UV-laser stimulated fluorescence.

P1-T02-125

Ioannis TZIFAS⁽¹⁾, Ulrich A. GLASMACHER⁽¹⁾, Michael BURCHARD⁽¹⁾, Christina TRAUTMANN⁽²⁾

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Enhanced track formation in pre-damaged strontium titanate by energetic heavy ions

P1-T02-129

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Raman study of ion beam irradiation damage on nanostructured TiO₂

P1-T02-132

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Non-destructive visualization of swift heavy ion induced lattice defects in apatite (Ca₅(PO₄)₃(OH,F,Cl)) using UV-laser stimulated fluorescence.

P1-T02-138

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Application of proton irradiation for study on radiation induced changes in microstructure and mechanical property of austenitic stainless steel

P1-T02-142

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TEM characterisation of high and low velocity Kr and Xe latent tracks morphology in YIG and YAG single crystals

P1-T02-143

Maxim SAIFULIN⁽¹⁾, **Jacques O'CONNELL**⁽²⁾, **Arno JANSE VAN VUUREN**⁽²⁾, **Vladimir SKURATOV**⁽¹⁾, **Nikita KIRILKIN**⁽¹⁾, **Maxim ZDOROVETS**⁽³⁾

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Degradation of the electrical conductivity of GaN under swift heavy ion irradiation

P1-T02-168

Platon KARASEOV⁽¹⁾, **Andrei TITOV**⁽¹⁾, **Andrei STRUCHKOV**⁽¹⁾, **Ashish KUMAR**⁽²⁾, **R. SINGH**⁽²⁾, **D. KANJILAL**⁽²⁾

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GaN surface damage formation by monatomic and molecular ion irradiation

P1-T02-171

Platon KARASEOV⁽¹⁾, **Konstantin KARABESHKIN**⁽¹⁾, **Andrei STRUCHKOV**⁽¹⁾, **Andrei I. TITOV**⁽¹⁾, **Mohammad Wali ULLAH**⁽²⁾, **Antti KURONEN**⁽²⁾, **Flyura DJURABEKOVA**⁽²⁾, **Kai NORDLUND**⁽²⁾, **Galina ERMOLAEVA**⁽³⁾, **Valerii SHILOV**⁽³⁾

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MD study of surface collision cascades in aluminium

P1-T02-216

Alexander VOLKOV, **Roman VOSKOBOYNIKOV**

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A key contribution of the ordered crystal structure of γ -TiAl intermetallics to its high radiation tolerance

P1-T02-237

Alexander VOLKOV, **Roman VOSKOBOYNIKOV**

NRC Kurchatov Institute, Russian federation

Hardness and modulus variation of borosilicate glasses irradiated by heavy ions

P1-T02-290

Tieshan WANG, **Xin DU**, **Wei YUAN**, **Xiaoyang ZHANG**, **Fengfei LIU**, **Mengli SUN**, **Haibo PENG**, **Liang CHEN**

Lanzhou University, China

High Energy 120 MeV Titanium ion irradiation induced modifications in structural, optical and surface morphological properties of Zirconium oxide thin films.

P1-T02-303

Vishnu CHAUHAN⁽¹⁾, Paramjit SINGH⁽²⁾, Jagjeevan RAM⁽¹⁾, Indra SULANIA⁽³⁾, Sunil OJHA⁽³⁾, Rajesh KUMAR*⁽¹⁾

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120 Au9+ ion induced modifications in optical, electrical, structural and surface morphological properties of titanium dioxide and tin oxide nanocomposite thin film by RF Sputtering

P1-T02-304

Vikas KUMAR⁽¹⁾, Paramjit SINGH⁽²⁾, Jagjeevan RAM⁽¹⁾, Rohit MEHRA⁽³⁾, Indra SULANIA⁽⁴⁾, Sunil OJHA⁽⁴⁾, Pawan. K. KULERIA⁽⁴⁾, Rajesh KUMAR*⁽¹⁾

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Creation of Surface Nanostructures in Lanthanum Fluoride Single Crystals by Irradiation with Slow Highly Charged Ions

P1-T03-14

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Investigation of the exit charge state distributions of highly charged ions transmitted through different 2D materials

P1-T03-21

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Surface tracks in Mica studied by high resolution AFM

P1-T03-25

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FE-SEM observation of chains of nano hillocks on oxide ceramics irradiated with SHI

P1-T03-40

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Swift heavy ion irradiation of interstellar dust analogues: Cosmic rays release of large carbonaceous species.

P1-T03-55

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Calculation of sputtering yield at ion bombardment of solids: computer simulation and theory

P1-T03-61

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Vicinage effect on emission statistics of secondary electron by molecular hydrogen penetrating a thin carbon foil

P1-T03-65

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Deconvolution models for determining the real surface composition of InP (100) after bombardment with 5 keV Ar ions at different angles

P1-T03-73

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Sputtering of Wollastonite by H and Ar ions

P1-T03-76

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Surface composition of ion bombarded nickel based alloys

P1-T03-105

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The regularities of surface corrugation of polyacrylonitrile based carbon fibers under high-fluence ion irradiation

P1-T03-107

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Characterization of graphene oxide film implanted by low energy copper ions

P1-T03-114

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Influence of ion implantation of dielectrics on charging under electron beam irradiation

P1-T03-123

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Retention mechanism of hydrogen and helium isotopes in beryllium studied with the quartz crystal microbalance technique

P1-T03-126

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Molecular dynamics simulations of angular distributions of particles sputtered by gas cluster ions

P1-T03-137

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Modifications of Single-Walled Carbon Nanotubes by highly energetic iodine ion irradiation

P1-T03-145

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Effective depth of electronic sputtering of WO₃ films by high-energy ions

P1-T03-146

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Sputtering yield of silicon by atomic and molecular ions impact

P1-T03-151

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Electronic sputtering of ionic crystals: Nanoparticle emission and charge-up effect

P1-T03-194

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Low-energy ion collision with radiosensitizing metallic nanoparticles in the gas phase

P1-T03-231

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Comparison of the response of NiO, ZnO and TiO₂ micro- and nano-structures on azimuthally rotating Swift Heavy Ion irradiation

P1-T04-11

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Spatially separated Ag dendrites for SERS, synthesized using ion-track template SiO₂/Si

P1-T04-20

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Shape-Controlled Growth of Gold Nanostructures in Limited Volume of Ion-Track SiO₂/Si Template Pores

P1-T04-27

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Template synthesis of FeNi nanotubes with varied length in pores of ion-track membranes

P1-T04-28

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Radiation-induced phase transition in Zn-based nanotubes

P1-T04-29

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Radiation-resistant magnetic field sensors based on SiO₂(Metal)/Si structures

P1-T04-30

Egor KANIUKOV, Dzmitry YAKIMCHUK, Victoria BUNDYUKOVA, Maksim KUTUZAU, Alena SHUMSKAYA, Yuriy BOGATYREV, Evlampiy TOCHILIN, Sergey DEMYANOV

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Current-dependent ion beam guiding by straight macro capillaries

P1-T04-48

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Current status of the study on high-efficiency MCP

P1-T04-49

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Characterization of resistive memories using Nuclear Reaction Analysis

P1-T04-118

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Formation of nano-porous surface structures by fast C60 beam bombardments

P1-T04-144

Hidetsugu TSUCHIDA⁽¹⁾, **Noriko NITTA**⁽²⁾, **Masaki NAKAMOTO**⁽²⁾, **Shigeo TOMITA**⁽³⁾, **Kimikazu SASA**⁽³⁾, **Koichi HIRATA**⁽⁴⁾, **Hiromi SHIBATA**⁽⁵⁾, **Yuichi SAITOH**⁽⁶⁾, **Kazumasa NARUMI**⁽⁶⁾, **Atsuya CHIBA**⁽⁶⁾, **Keisuke YAMADA**⁽⁶⁾, **Yoshimi HIRANO**⁽⁶⁾, **Yasushi HOSHINO**⁽⁷⁾

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Etching kinetics of ion track nano-pores in polymers determined by in situ SAXS

P1-T04-157

Patrick KLUTH⁽¹⁾, **Andrea HADLEY**⁽¹⁾, **Mark GRIGG**⁽¹⁾, **Umme Habiba HOSSAIN**⁽¹⁾, **Christian NOTTHOFF**⁽¹⁾, **Pablo MOTA-SANTIAGO**⁽¹⁾, **Maria Eugenia TOIMIL-MOLARES**⁽²⁾, **Christina TRAUTMANN**⁽³⁾, **Marika SCHLEBERGER**⁽⁴⁾, **Stephen MUDIE**⁽⁵⁾

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Inlet MeV ion beam dependence of transmission property for the He-capillary

P1-T04-164

Moemi ASAMURA⁽¹⁾, **Yui FUKUNAGA**⁽¹⁾, **Kunikazu ISHII**⁽²⁾, **Hidemi OGAWA**⁽²⁾

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Molecular axis alignment of fast OH⁺ ions passing through nanocapillaries

P1-T04-167

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Porous Au nanowires prepared by ion track technology for plasmonic applications

P1-T04-182

Ina SCHUBERT, **Loic BURR**, **Maria Eugenia TOIMIL-MOLARES**, **Christina TRAUTMANN**

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Opportunities for ion track studies at small and medium size accelerator facilities

P1-T04-184

Marko KARLUSIC⁽¹⁾, **Stjepko FAZINIC**⁽¹⁾, **Zdravko SIKETIC**⁽¹⁾, **Maja BULJAN**⁽¹⁾, **Iva BOGDANOVIC-RADOVIC**⁽¹⁾, **Sigrid BERNSTORFF**⁽²⁾, **Tonci TADIC**⁽¹⁾, **Donny Domagoj COSIC**⁽¹⁾, **Iva BOŽICEVIC MIHALIC**⁽¹⁾, **Ivana ZAMBONI**⁽¹⁾, **Branko ŠANTIC**⁽¹⁾, **Kristina TOMIC**⁽¹⁾, **Marika SCHLEBERGER**⁽³⁾, **Milko JAKŠIĆ**⁽¹⁾

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Energy dependence of blocking effects on the transmission of Ne⁷⁺ ions through nanocapillaries

P1-T04-186

Peter HERCZKU, **Zoltán JUHÁSZ**, **T. S. Sándor KOVÁCS**, **Richard RÁCZ**, **Sándor BIRI**, **Béla SULIK**

Institute for Nuclear Research, Hungary

Radiolysis of N₂O : CO₂ ice mixture by 90 MeV ¹³⁶Xe²³⁺ bombardment

P1-T05-35

Philippe BODUCH⁽¹⁾, **Ana BARROS**⁽²⁾, **Rodrigo PEREIRA**⁽²⁾, **Daniele FULVIO**⁽³⁾, **Alicja DOMARACKA**⁽¹⁾, **Hermann ROTHARD**⁽¹⁾, **Enio DA SILVEIRA**⁽³⁾

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Valine radiolysis by h, n and s mev ion bombardment

P1-T05-47

Cíntia DA COSTA⁽¹⁾, **Enio DA SILVEIRA**⁽¹⁾, **Gabriel VIGNOLI MUNIZ**⁽²⁾, **Philippe BODUCH**⁽³⁾, **Hermann ROTHARD**⁽³⁾

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An up-to-date local dose distribution theory for describing the track registration property of Kapton film irradiated with heavy ions, including U ion

P1-T05-103

Tamon KUSUMOTO⁽¹⁾, **Morikazu SAKAI**⁽²⁾, **Atsushi YOSHIDA**⁽³⁾, **Tadashi KAMBARA**⁽³⁾, **Yoshiyuki YANAGISAWA**⁽³⁾, **Satoshi KODAIRA**⁽⁴⁾, **Keiji ODA**⁽²⁾, **Remi BARILLON**⁽⁵⁾, **Tomoya YAMAUCHI**⁽⁵⁾

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Stability of dry DNA irradiated with 1.2 MeV/amu Xe and Ar ions

P1-T05-106

Mikhail KARGANOV⁽¹⁾, **Irina ALCHINOVA**⁽²⁾, **Vladimir FELDMAN**⁽³⁾, **Sergey GORBUNOV**⁽⁴⁾, **Oleg IVANOV**⁽⁵⁾, **Ruslan RYMZHANOV**⁽⁶⁾, **Vladimir SKURATOV**⁽⁷⁾, **Alexander VOLKOV**⁽⁸⁾

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Evaluation of uncertainties in water-equivalent path lengths derived from proton computed tomography

P1-T05-154

Atsuki TERAOKAWA, **Hibiki HOSOKAWA**, **Kenta SHIGIHARA**, **Ai KAJIYAMA**, **Rina NAGAO**, **Keiichiro NARUMI**, **Hiroyuki HOSOKAWA**, **Yoshihiko FUJISE**, **Hiroki USHIJIMA**, **Yuta WAKAYAMA**, **Mitsuhiro FUJIWARA**, **Keitaro HITOMI**, **Nobumichi NAGANO**, **Nogami MITSUHIRO**

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Radio-resistance of Pyridine Ices and Effects of Water Environment

P1-T05-230

Aditya Narain AGNIHOTRI⁽¹⁾, **Alicja DOMARACKA**⁽¹⁾, **Hermann ROTHARD**⁽¹⁾, **Charles DESFRANÇOIS**⁽²⁾, **Frédéric LECOMTE**⁽²⁾, **Nicolas NIEUWJAER**⁽²⁾, **Bruno MANIL**⁽²⁾, **Philippe BODUCH**⁽¹⁾

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Transition and crystallization phenomena in gamma irradiated isotactic Polypropylene

P1-T05-255

Marius ENACHESCU⁽¹⁾, **Doina GAVRILA**⁽²⁾, **Victor STOIAN**⁽²⁾

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Bond breaking cross sections in polymer ultrathin films irradiated by high-energy ions
Ricardo PAPALEO⁽¹⁾, **Raquel THOMAZ**⁽¹⁾, **Pierre LOUETTE**⁽²⁾, **Sven MÜLLER**⁽¹⁾, **Gabriela HOFF**⁽³⁾, **Jean-Jacques PIREAUX**⁽²⁾, **Christina TRAUTMANN**⁽⁴⁾

P1-T05-266

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Surface nanostructures induced by highly-charged ions on ultrathin PMMA films
Ricardo PAPALEO⁽¹⁾, **Raquel THOMAZ**⁽¹⁾, **Marcelo DELUCIS**⁽¹⁾, **Philipp ERNST**⁽²⁾, **Marika SCHLEBERGER**⁽²⁾

P1-T05-270

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Polymer/Polymer Interface Adhesion by In Situ Compatibilization
Yongsok SEO

P1-T05-289

Seoul National University, Republic of Korea

Poster session #2

Electronic energy losses and straggling in low energy proton interaction with silicon films
Mario MERY⁽¹⁾, **Juan D. URIBE**⁽¹⁾, **Marcos FLORES**⁽²⁾, **Christian ROMERO**⁽³⁾, **Vladimir A. ESAULOV**⁽⁴⁾, **Jorge VALDÉS**⁽¹⁾

P2-T01-148

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Theoretical developments for the stopping power in an extended energy range
Claudia MONTANARI, **Alejandra MENDEZ**, **Jorge MIRAGLIA**, **Darío MITNIK**

P2-T01-150

Instituto de Astronomía y Física del Espacio, CONICET and Universidad de Buenos Aires, Argentina

Extended wave packet model to calculate energy loss moments in matter
Claudia MONTANARI⁽¹⁾, **Claudio ARCHUBI**⁽¹⁾, **Nestor ARISTA**⁽²⁾

P2-T01-208

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Proton energy loss in multilayer graphene and carbon nanotubes
Mario MERY⁽¹⁾, **Juan D. URIBE**⁽²⁾, **Raul CARDOSO-GIL**⁽³⁾, **Bernardo FIERRO**⁽²⁾, **Isabel ABRIL**⁽⁴⁾, **Rafael GARCIA-MOLINA**⁽⁵⁾, **Jorge VALDÉS**⁽²⁾, **Vladimir A. ESAULOV**⁽⁶⁾

P2-T01-233

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Considerations about projectile and target X-rays induced during heavy ion bombardment
Johnny DIAS, **Flávia FERNANDES**, **Livio AMARAL**

P2-T01-238

Ion Implantation Laboratory, Institute of Physics, UFRGS, Brazil

Resonant coherent excitation of heavy ions in a crystal using a high-energy accelerator and a storage ring at GSI/FAIR

P2-T01-252

Toshiyuki AZUMA⁽¹⁾, **Angela BRÄUNING-DEMIAN**⁽²⁾, **Harald BRÄUNING**⁽²⁾, **Christina DIMOPOULOU**⁽²⁾, **Regina HERB**⁽²⁾, **Shinpei IIDA**⁽³⁾, **Carl KLEFFNER**⁽²⁾, **Jörg KRÄMER**⁽⁴⁾, **Susumu KUMA**⁽¹⁾, **Sergey LITVINOV**⁽²⁾, **Sebastian MENK**⁽⁵⁾, **Yuji NAKANO**⁽³⁾, **Shinji OKADA**⁽¹⁾, **Wilfried NÖRTERSHÄUSER**⁽⁴⁾, **Markus STECK**⁽²⁾

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Ion impact induced fragment emission from hydrogen molecule

P2-T01-258

Zoltán JUHÁSZ⁽¹⁾, **Sándor DEMES**⁽¹⁾, **Jean-Yves CHESNEL**⁽²⁾, **Sándor T. S. KOVÁCS**⁽¹⁾, **Péter HERCZKU**⁽¹⁾, **Erika BENE**⁽¹⁾, **Violaine VIZCAINO**⁽²⁾, **Alain MÉRY**⁽²⁾, **Jimmy RANGAMA**⁽²⁾, **Jean-Christophe POULLY**⁽²⁾, **Nicolas SENS**⁽²⁾, **Béla SULIK**⁽¹⁾

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Experimental energy loss of Hydrogen molecules fragments at keV energies traversing multi walled carbon nanotubes

P2-T01-260

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Multiple ionization cross sections for swift ion impact on ne-like molecules

P2-T01-263

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A single method to calculate multiple ionization cross sections of Air molecules by ion impact.

P2-T01-268

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Theoretical study of W-values for particle impact on vapour and liquid water

P2-T01-269

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Comparison between anion and cation emission from methane molecules colliding with 10.5-keV singly charged carbon cations

P2-T01-271

Jean-Yves CHESNEL ⁽¹⁾, **Zoltán JUHÁSZ** ⁽²⁾, **Elie LATTOUF** ⁽¹⁾, **Bernd A. HUBER** ⁽¹⁾, **Sándor T. S. KOVÁCS** ⁽²⁾, **Péter HERCZKU** ⁽²⁾, **Erika BENE** ⁽²⁾, **Violaine VIZCAINO** ⁽¹⁾, **Alain MÉRY** ⁽¹⁾, **Jean-Christophe POULLY** ⁽¹⁾, **Jimmy RANGAMA** ⁽¹⁾, **John A. TANIS** ⁽³⁾, **Béla SULIK** ⁽²⁾

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Influence of xenon ions charge state on depth distribution and defect formation during implantation in silicon

P2-T01-291

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Deuterated propane (C3D8) fragmentation at EBIS facility in Kielce

P2-T01-294

Karol SZARY ⁽¹⁾, **Jacek SEMANIAK** ⁽¹⁾, **Dariusz BANAS** ⁽¹⁾, **Ilona STABRAWA** ⁽¹⁾, **Aldona KUBALA-KUKUS** ⁽¹⁾, **Marek PAJEK** ⁽¹⁾, **Regina STACHURA** ⁽¹⁾, **Lukasz JABLONSKI** ⁽¹⁾, **Pawel JAGODZINSKI** ⁽²⁾, **Daniel SOBOTA** ⁽¹⁾

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Applications of the operator method for the problem of scattering of fast charged particles in thin crystals

P2-T01-316

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Nonequilibrium charge states in calculations of energy loss and ranges of ions

P2-T01-323

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Ionization probability of sputtered coronene molecules

P2-T01-327

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k-shell Photoionization of O2+ molecular ions

P2-T01-340

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Non-equilibrium lattice structure induced by high energy heavy ion bombardment in NiTi alloy

P2-T02-70

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A new type of refractive index modification in YAG crystals induced by swift heavy ion irradiation

P2-T02-113

Hiroshi AMEKURA ⁽¹⁾, **Rang LI** ⁽²⁾, **Feng CHEN** ⁽²⁾, **Nariaki OKUBO** ⁽³⁾, **Norito ISHIKAWA** ⁽³⁾

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Microstructure and Raman spectra of third generation SiC fibers by 410 MeV $^{112}\text{Sn}^{26+}$ ion beam irradiation

P2-T02-161

Yin SONG, Chonghong ZHANG

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Measurement of Local Temperature around the Impact Points of Fast Ions under Grazing Incidence

P2-T02-163

Sun Hi YOON⁽¹⁾, Hiroki KOKABU⁽¹⁾, Hyosung LEE⁽¹⁾, Kaoru NAKAJIMA⁽¹⁾, Kazumasa NARUMI⁽²⁾, Yuichi SAITOH⁽²⁾, Makoto MATSUDA⁽³⁾, Masao SATAKA⁽³⁾, Masahiko TSUJIMOTO⁽⁴⁾, Marcel TOULEMONDE⁽⁵⁾, Kenji KIMURA⁽¹⁾

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New insight of interaction between dislocation and helium bubbles

P2-T02-169

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Multiscale Simulation of Single Particle Displacement Damage in Silicon

P2-T02-185

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Modification of "silica+zinc" nanocomposite by swift heavy ions: radiation-induced intense visible luminescence and shape elongation of zinc nanoparticles

P2-T02-195

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Response of monazite-type ceramics to swift heavy-ion irradiations

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Investigation of Phase Formation and Thermodynamic Calculations between palladium and silicon carbide

P2-T02-198

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Swift heavy ion research of condensed matter at extreme conditions.

P2-T02-200

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Defect change in UO₂ during ion irradiations using in situ TEM

P2-T02-201

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Ion track formation in radiation hard materials: examples of GaN, MgO, MgAl₂O₄ and Al₂O₃
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Prospects of mixing across Pd_{1-x}Ni_x/Si interfaces from inelastic thermal spike model calculation

P2-T02-209

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Energetic helium irradiation damage in hexagonal tungsten carbide studied with XRD and AFM

P2-T02-212

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Investigations on the displacement damage dose effects induced by heavy ion irradiation in silicon PIN photodiodes: implications for modeling and simulation

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Effects of Ion Irradiation on Optical Property of Silicon Films

P2-T02-226

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MD simulations of primary damage formation in L12 Ni₃Al intermetallics

P2-T02-241

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An insight into radiation resistance of D019 Ti₃Al intermetallics

P2-T02-244

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Stability of microstructure of zirconium and silicon nitrides multilayers irradiated by noble-gas ions

P2-T02-247

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Effect of Swift Heavy Ions irradiation in the migration of Silver Implanted into polycrystalline SiC P2-T02-249

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Radiation-Enhanced Diffusion in Mg₂SiO₄ P2-T02-280

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Materials research ion beam facilities at GSI/FAIR P2-T02-292

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Analysis of linear energy transfer effects on the scintillation properties of Ce:Gd₃Al₂Ga₃O₁₂ (GAGG) P2-T02-293

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An improved terminal for material and device irradiation in HIRFL P2-T02-295

Yumei SUN, Jie LIU, Huijun YAO, Jinglai DUAN, Jie LUO, Jiande LIU, Dan MO, Pengfei ZHAI

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Figures of merit of carbon materials for beam intercepting devices operating in high-power ion accelerators P2-T02-296

Fabian JÄGER⁽¹⁾, Pascal SIMON⁽¹⁾, Alexey PROSVETOV⁽¹⁾, Philipp BOLZ⁽¹⁾, Christina TRAUTMANN⁽¹⁾, Marilena TOMUT⁽²⁾

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Swift heavy ions induced degradation of mechanical properties of graphitic materials P2-T02-297

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Raman spectroscopy analysis of swift heavy ion beam induced damage along the ion range in flexible graphite P2-T02-298

Alexey PROSVETOV⁽¹⁾, Florent YANG⁽²⁾, Philipp BOLZ⁽¹⁾, Christina TRAUTMANN⁽¹⁾, Marilena TOMUT⁽²⁾

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Thermal desorption spectroscopy of helium ion beam and plasma irradiated tungsten P2-T02-300

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120 Au⁹⁺ ion induced modifications in optical, electrical, structural and surface morphological properties of titanium dioxide and tin oxide nanocomposite thin film by RF Sputtering

P2-T02-304

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Defect structure and precipitates in Zn implanted Si after swift Xe ion irradiation

P2-T02-326

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Irradiation hardening of F82H, T91, SIMP and ODS steels under dual Fe³⁺/He⁺-ion irradiation at 300°C and 450°C

P2-T02-328

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ION BEAM MODIFICATION OF NANO-DIMENSIONAL SILICON STRUCTURES

P2-T02-339

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Irradiation-induced defects in graphene on copper

P2-T02-341

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Electron emission mechanisms in MeV-energy ion-molecule collisions

P2-T03-51

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Evolution of periodical surface nanostructures under off-normal gas cluster ion irradiation

P2-T03-156

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Highly-sensitive time-of-flight secondary ion mass spectrometry with high energy cluster ion beams

P2-T03-172

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Sensitivity improvement of bio-molecules using ionic liquid matrix in mega electron volt secondary ion mass spectrometry

P2-T03-173

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The ion implantation of graphene oxide by Cu, Ga and Au metallic ions

P2-T03-174

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Surface effects during the swift heavy ion irradiation in graphene

P2-T03-177

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Negative-ion production on surface under hydrogen plasma exposure: a comparative study between graphite and diamond

P2-T03-178

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Coster-Kronig transition of fast cluster ions studied by zero-degree Auger electron spectroscopy

P2-T03-183

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Secondary ion and neutral mass spectrometry with swift heavy ion projectiles

P2-T03-211

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A comparison of primary damage formation in the bulk and on the surface of irradiated materials

P2-T03-235

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Surface characterization of nanolayers modified by slow highly charged xenon ions

P2-T03-257

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Electronic sputtering from silicate targets bombarded by heavy ions

P2-T03-272

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Grazing incidence angle X-ray spectroscopy of Ti and TiO₂ nanolayers implanted with Xe^{q+} ions

P2-T03-301

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Swift proton induced light emission from thin silver foil

P2-T03-306

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Ion-induced desorption and sputtering of frozen CO

P2-T03-309

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Nanoripple formation during cluster projectile bombardment of Au surface – an insight from the Molecular Dynamics Computer Simulations

P2-T03-310

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Conditioning methods to reduce ion-induced desorption

P2-T03-311

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Secondary electron emission from borosilicate glass under electron impact

P2-T03-313

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Velocity correlated cluster emission in surface sputtering by a large polyatomic projectile

P2-T03-315

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Interpretation of X-ray cascades emitted in interaction of slow highly charged Xe ions ($q=26-35$) with metallic foils

P2-T03-322

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Study on electrical properties of graphene field effect transistors under swift heavy ion irradiation

P2-T03-333

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Hillocks and surface effects in swift heavy ion irradiated insulators

P2-T03-336

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Cu₂O-based nanostructures fabricated by ion-track nanotechnology for solar hydrogen evolution

P2-T04-217

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MEIS characterization of arsenic PIII implants in FinFETs devices

P2-T04-239

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Analysis of non-centrosymmetric materials using electron and ion beams

P2-T04-240

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Electron guiding through macroscopic metal capillaries

P2-T04-243

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A compact, flexible low energy experimental platform of highly charged ions for ion-matter interaction

P2-T04-251

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A transmission experiment of carbon ion beam of 100 MeV/u through tapered glass capillaries

P2-T04-276

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Synthesis and Characterisation of Copper Nanowire Networks

P2-T04-282

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Transmission dynamics of 1 MeV proton microbeam guided through a single insulator macrocapillary

P2-T04-285

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Evolution of the multi-walled carbon nanotubes irradiated by noble gases

P2-T04-314

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Calculations of defects formation in nanotubes under ion irradiation

P2-T04-317

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Change in the wettability of the surface of carbon nanotubes by ion irradiation

P2-T04-329

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Performance analysis of CFRP as a radiation protection shield for space applications

P2-T05-85

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Control of the size of etchable ion tracks in PVDF irradiation in an oxygen atmosphere and with fullerene clusters -

P2-T05-159

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Effects of low energy electron on DNA oligomer-cisplatin adduct

P2-T05-274

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Ion-collision induced reactivity inside of carbonaceous molecular clusters

P2-T05-278

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A new experimental set-up to analyze the emitted electrons from radiosensitizers (metallic atoms and nanoparticles) upon ion collision by velocity map imaging

P2-T05-286

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Experimental and computational study of gold nanoparticles as a radiosensitizer of cancer cells to proton radiation

P2-T05-299

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Irradiated porous silicon as a paramagnetic material for MRI imaging

P2-T05-308

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On the Behavior of the Articular Cartilage Extracellular Matrix during Carbon Ion Hadrontherapy Treatments

P2-T05-338

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