# 26th International Conference on Nuclear Tracks in Solids


# BOOK OF ABSTRACTS

*and program*

KOBE, JAPAN

15th - 19th September 2014

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Integrated Research Center of Kobe University

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## KOBE, JAPAN

## 15th - 19th September 2014

26th International Conference on Nuclear Tracks in Solids

This Conference is jointly organized by the International Nuclear Track Society and Kobe University, which is also supported by the Ionizing Radiation Division (The Japan Society of Applied Physics) and the Japan Society of Nuclear Track Detectors.

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Welcome to 26th ICNTS, Kobe

It is great pleasure to welcome you to Kobe University.

This Book contains about 130 abstracts that describe recent achievements on the fundamentals and applications of nuclear tracks in matters to the Conference Invited, Oral, or Poster Presentations.

We believe your presentations and attendance make the Conference as a fruitful and successful one.

Chair of the Organizing Committee
Secretary of the Organizing Committee
August 2014

26th International Conference on Nuclear Tracks in Solids

CONTENTS

# ORGANIZING COMMITEE

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## INTERNATIONAL COMMITTEE

PROGRAM 1

Invited talks and Orals

Hall of Integrated Research Center of Kobe University

**14th Sunday**

16:00 - 18:00 Registration (Hall 2F)

18:00 - 19:00 Welcome Reception (Lounge 5F)

**15th Monday** **(S3: O12)**

08:30 - 10:00 Registration

10:00 - 10:40 Opening address President of Kobe University
President of INTS
Chair of Organizing Committee

10:40 -11:20 (1) **Invited Talk** Chair Keiji Oda

S-1 Highlight of Results from ATLAS at LHC
Hisaya Kurashige

11:20 - 11:40 *coffee break*

11:40 - 12:30 (2) **Space Radiations and Instrumentations** Chair Koichi Ogura

SS-0 Memory of Prof. T. Doke
Shi-Lun Guo, Koichi Ogura

A-1 Space radiation dosimetry by PADLES in the ISS Russian segment to evaluate the effects of polyethylene shielding and different tissue equivalent materials
Aiko Nagamatsu

M-1 Precise track analysis and application for various radiation fields with high speed microscope and PitFit software
Satoshi Kodaira

12:30 - 14:00 *Lunch*

14:00 - 14:40 (3) **Invited Talk** Chair Shigeki Aoki

S-3 Latest Developments in Nuclear Emulsion Technology
Kunihiro Morishima

14:40 - 15:20 (3) **Applications of Nuclear Emulsion 1** Chair Shoji Mikado

D-1 Measuring the gravitational acceleration for antihydrogen with emulsion detectors
Tomoko Ariga

D-2 Study of double-strangeness nuclear systems with nuclear emulsion
Kazuma Nakazawa

15:20 - 15:40 *coffee break*

15:40 - 17:20 (4) **Applications of Nuclear Emulsion 2** Chair Kunihiro Morishima

D-3 Development of nuclear emulsion detector for muon radiography
Akira Nishio

D-4 Nuclear Emulsion Readout System, HTS
Masahiro Yoshimoto

D-5 Fine grained nuclear emulsion and new readout system for dark matter search
Takashi Asada

D-6 New Experimental Project for Study of Neutrino with Nuclear Emulsion Detector at J-PARC
Tsutomu Fukuda

D-7 GRAINE project: Gamma-ray Astro Imager with Nuclear Emlsion
Shigeki Aoki

17:20 - 17:40 *break*

17:40 - 18:20 (5) **Invited Talk** Chair Shoji Mikado

S-2 FNTD TECHNOLOGY - LATEST ADVANCES IN INSTRUMENTATION AND NEUTRON-PHOTON DISCRIMINATION
Mark S. Akselrod

18:20 - 19:20 (5) **Fluorescent Nuclear Track Detector and other Novel Track Detectors**
Chair Shoji Mikado

E-1 Silica-Nanocapsule-Doped CR-39 Fluorescence Detector for X-rays
Hirokazu Miyoshi

E-3 Two- and three-dimensional X-ray image reconstruction from a disk-type Ag-activated phosphate glass plate
Toshio Kurobori

E-2 CHARACTERIZATION OF DAP THROUGH MATERIAL SCIENCE TECHNIQUES
Carlos Tello Carlos Alberto

**16th Tuesday** **(S3: O22)**

08:30 - 10:10 (6) **Life Science and Nano Technology** Chair Nakahiro Yasuda

K-3 Applications of nuclear track membranes to filtration of medical injections and various transfusions to remove solid particles
Zhi-Bo He

K-2 Study on radiation-induced damage of DNAs using an oligonucleotide with fluorescence modification.
Youichirou Matuo

K-1 Towards an in-vivo chemical dosimeter for hadron therapy based on fluorescent probes
Faycal Torche

N-1 TRACK PORE MATRIXES FOR OBTAINING OF MAGNETIC NANOWIRES: ELECTRODEPOSITION AND SOME PROPERTIES
Dmitry L. Zagorskiy

N-2 Template based synthesis of metal, semiconductor and heterojunction nanowires using electrochemical deposition and their characterization

Amandeep Kaur

10:10 - 10:50 (6) **Invited Talk** Chair Nakahiro Yasuda

S-12 High Sensitive Palmtop Sensor with Etched Tracks on a Sensor-Plate

Koichi Awazu

10:50 - 11:10 *coffee break*

11:10 - 11:50 (7) **Laser Driven Particle Acceleration** Chair Michel Fromm

F-1 Acceleration of background gas ions due to Coulomb explosion of clusters triggered by irradiation of ultrashort intense laser pulses

Masato Kanasaki

F-2 A novel method based on Digital Image Correlation to investigate by CR-39 detectors the occurrence of fusion reactions in a laser produced plasma

Massimo Calamosca

11:50 - 12:30 (7) **Invited Talk** Chair Michel Fromm

S-6 Proof of principle experiment of Laser-driven Exotic Nuclei extraction-acceleration method

Mamiko Nishiuchi

12:30 - 13:30 *Lunch* **International Committee on 5 F**

13:30 - 15:30 (8) **Radon Detection and Measurements 1** Chair Takao Tsuruta

J-1 Radon and Thoron ($^{222}$Rn and $^{220}$Rn) concentration distribution study on three detection planes inside of a closed room using Nuclear Track Methodology

Luigi Tommasino

J-2 Noble gases as tracers for the groundwater and streams in central mountainous regions of Taiwan

Tsanyao Frank Yang

J-3 Temporal Variations of Soil Gas Concentration for Seismic Precursory Study in the Longitudinal Valley, Eastern Taiwan

Ching-Chou Fu

J-4 Measurement of natural radionuclides and radon exhalation rate of soil samples in some places of Karbi Anglong district of Assam, India using Gamma ray spectroscopy and can technique method.

RANJAN KUMAR KAKATI

J-5 Radon concentration and exhalation rate measurements by SSNTD

Giuseppina Imme

J-6 Use of statistical methods for analysis of time-series soil-gas monitoring data for seismogenic studies in Taiwan

Vivek Walia

15:30 - 15:40 *coffee break*

15:40 - 16:20 (9) **Invited Talk** Chair Dong-Hai Zhang

S-7 Nuclear Tracks in Students Laboratory: Some Simple Experiments

S K Chakarvarti

16:20 - 17:40 (9) **Radon Detection and Measurements 2** Chair Dong-Hai Zhang

J-7 Long-term radon level dynamics in the Amer faulty soil

Victoria Moreno

J-8 Integrated radon-thoron monitoring in Tatun volcanic areas of northern Taiwan using solid state nuclear track detectors (LR-115) for volcanic and seismic study

Arvind Kumar

J-10 Optimization of etching conditions for CDs/DVDs used as detectors for high radon concentrations

Dobromir Stefanov Pressyanov

J-11 A Comparative study of indoor radon contributed by diffusive and advective transport through concrete

R P Chauhan

17:40 - 17:50 *break*

17:50 - 19:30 (10) **Radon Detection and Measurements 3** Chair Satoshi Kodaira

J-12 Synthesis and Characterization of Conducting Polymers as a radiation sensor

Rajendra Girjappa Sonkawade

L-4 An estimation of natural radioactivity and radon exhalation rate in soil samples from some areas of Jharkhand State of India

Ajay Kumar Mahur

L-5 Radon exhaltion rate, natural radioactivity and radiation hazard assessment in Indian cement samples

Anil Sharma

J-13 Radon-Thoron and their Progeny Measurements in Multi-Storeyed Malls in District Faridabad, Haryana (India)

Nitin Gupta

J-9 ENHANCED RADON/THORON EMISSION FROM SANDSTONES CONTAINING URANIUM/RADIUM MINERALS

Hameed Ahmed Khan

19:30 - 20:00 **POSTER (I) Entrance 1F** Chair Koji Kuraoka

**17th Wednesday** **(S1: O9)**

08:30 - 10:10 (11) **Nuclear Physics and Chemistry 1** Chair Yuji Fukuda

B-1 Projectile fragment emission in the fragmentation of silicon on carbon and polyethylene targets at 800 A MeV

Dong-Hai Zhang

B-3 An improved FT-TIMS method of measuring uranium isotope ratios in the uranium-bearing particles

Yan Chen

B-5 Spallation and BURST - two paths of high-energy heavy ion interactions
S R Hashemi-Nezhad

O-1 Study of $^{12}C$ beam with the energy E = 2.5 GeV. using layers of plastic CR-39
Valery Anatolievich Ditlov

O-2 Measurement of Radioactivity in Indian Vegetation using Gamma Spectrometry
Krishan Kant

10:10 - 10:30 *coffee break*

10:30 - 11:10 (12) **Invited Talk** Chair Carles Domingo

S-4 Functional Nanopores Based on Nuclear Track
Yugang Wang

11:10 - 12:30 (12) **Nuclear Track Physics and Chemistry 1** Chair Carles Domingo

C-3 Characterization of solid state nuclear track detectors of the CR-39/PM-355 type for light charged particle spectroscopy
Aneta Malinowska

C-5 Influence of UV-irradiation on latent tracks in PET films
Qi Wen

C-6 Parameters of 500 MeV/u $^{56}Fe$ tracks in bubble detector of the T-15
Shi-Lun Guo

C-4 GEOCHEMICAL INVESTIGATIONS FOR URANIUM IN SOME AREAS OF JHARKHAND STATE USING FISSION TRACK TECHNIQUE
Bhagirath Prasad Singh

12:30 - 14:00 *Lunch*

**Research Exchange Open Space (Lounge 5F)**

14:00 - 15:00 **POSTER (I) Entrance 1F** Chair Koji Kuraoka

**Research Exchange Open Space (Lounge 5F)**

15:00 - 15:30 **A SHORT MOVIE on K computer (main Hall)**

15:30 **EXCURSION**
*Bus start*

19:00 - 21:00 **BANQUET**

**18th Thursday** **(S3:O10)**

08:30 - 10:10 (13) **Neutron Measurements and Analysis** Chair Masato Kanasaki

H-2 THE USE OF SSNTD TECHNIQUE FOR THE EVALUATION OF PHOTO-NEUTRON FLUENCES IN RADIOTHERAPY FACILITIES
Zohra Lounis Mokrani

H-3 Study of sub-actinide ($^{209}Bi$, $^{nat}Pb$, $^{197}Au$) fission in the Quinta assembly of JINR

N L Asquith

H-5 Measurement of the secondary neutron field inside a water phantom exposed to scanning proton radiotherapy using PADC track detectors

M. Romero-Expósito

H-1 The fluence of high energy neutrons emitted from surface of QUINTA setup irradiated by deuteron beams of energies of 4 and 8 GeV

Vinod Kumar Verma

H-4 CR-39 detector for determination of equivalent dose and energy spectrum of Am-Be source

Maygol Golfeshani

10:10 - 10:30 *coffee break*

10:30 - 11:10 (14) **Invited Talk** Chair Rémi Barillon

S-5 The use of CR-39 Plastic Nuclear Track Detector in quantifying the contributionto dose in healthy tissue from Secondary Neutrons in Proton and Photon Radiotherapy

Eric R Benton

11:10 - 12:10 (14) **Fission Track Dating and Geology** Chair Rémi Barillon

L-1 Mesozoic-Cenozoic exhumation history and paleotopography of the Huangling massif in Central China from apatite fission track and (U-Th)/He data

Xiang Ge

L-2 A unique value of $^{238}U$ spontaneous fission decay constant supported by fission-track dating with the external detector method: A reply to the 2000 IUPAC recommendation

Hideki Iwano

L-3 Detrital zircons from mainland China in the Palawan Continental Terrane

Monika Walia

12:10 - 12:50 (14) **Invited Talk** Chair

S-8 Calibration for the Fission-Track Dating using LA-ICP-MS

Sandro Guedes

12:50 - 14:20 *Lunch*

14:20 - 15:00 (15) **Invited Talk** Chair A. Nourreddine

S-11 The-State-of-the-art Development of Electrochemical Etching of Charged Particle Tracks in Polycarbonate Track Detectors

Mehdi SOHRABI

15:10 - 15:50 (15) **Nuclear Track Physics and Chemistry 2** Chair A. Nourreddine

C-1 Tomographic study of ion tracks by energy-loss analysis with a MeV-ion microprobe

Jiri Vacik

C-2 Effect of Temperature on Growth of Cu wires and Tubes in Etched Cellulose Nitrate and Makrofol KG Nuclear Track Detector

Mitra Ghergherehchi

15:50 - 16:10 *coffee break*

16:10 - 17:10 **POSTER (II) Entrance 1F** Chair Akira Taniike

17:10 - 19:10 **GENERAL ASSEMBLY**

**19th Friday** **(S2:O5)**

08:30 - 09:40 **POSTER (II) Entrance 1F** Chair Akira Taniike

**Research Exchange Open Space (Lounge 5F)**

09:40 - 10:20 (16) **Invited Talk** Chair Masami Fujii

S-10 Low energy electrons and swift ion track structure in PADC

Michel Fromm

10:20 - 11:00 (16) **Invited Talk** Chair Masami Fujii

S-9 Chemical structure of heavy ion tracks in polymers

Rémi Barillon

11:00 - 11:20 *coffee break*

11:20 - 12:20 (17) **Materials and Heavy Ions** Chair Eric R Benton

I-1 On the modified structure around the latent tracks in PADC films exposed to protons and heavy ions

Tamon Kusumoto

I-2 Influence of SHI upon nanohole free volume and micro scale level surface modifications of polyethyleneterephthalate polymer films

RAJESH KUMAR

I-3 Swift Heavy Ions Induced Variation in the Transport Properties of Semiconducting Nanowires

Pallavi Rana

12:20 - 13:00 (17) **Nuclear Physics and Chemistry 2** Chair Eric R Benton

B-2 Gamma radiation induced modifications on physico- chemical properties of Makrofol (KG & N) polycarbonate

Sanjeev Kumar Gupta

B-4 Copper Nano- and Micro wires Electrodeposited in Etched Cellulose Nitrate and Makrofol KG Nuclear Track Detector

Banin Shakeri jooybari

13:00 - 14:00 *Lunch*

14:00 - 15:00 **Closing**

**Perelygin and Walker prizes**

**Transfer of the Flag**

**Instruction on the publication of Proceedings**

PROGRAM 2

Posters

## Entrance of Integrated Research Center of Kobe University

| **POSTER (I)** | **16th Tuesday: 19:30 - 20:00** | **17th Wednesday: 14:00 - 15:00** |
|---|---|---|
| A. Space Radiations | (P1) | |
| C. Nuclear Track Physics and Chemistry 1 | (P1) | |
| D. Applications of Nuclear Emulsion | (P8) | |
| H. Neutron Measurements and Analysis 1 | (P10) | |
| J. Radon Detection and Measurements | (P14) | |
| K. Life Sciences | (P2) | |
| M. Instrumentation and Software | (P2) | (38) |

| **POSTER (II)** | **18th Thursday: 16:10 - 17:10** | **19th Friday: 08:30 - 10:00** |
|---|---|---|
| B. Nuclear Physics and Chemistry | (P4) | |
| C. Nuclear Track Physics and Chemistry 2 | (P11) | |
| F. Laser Driven Particle Acceleration | (P1) | |
| G. Beam Diagnostic for Hadron Therapy | (P1) | |
| H. Neutron Measurements and Analysis 2 | (P1) | |
| I. Materials and Heavy Ions | (P5) | |
| L. Fission Track Dating and Geology | (P6) | |
| N. Nanotechnology | (P4) | |
| O. Other New Technology | (P3) | (36) |

**POSTER (I)** **16th Tuesday: 19:00 - 20:00** **17th Wednesday: 14:00 - 15:00**

Chair Koji Kuraoka

A. Space Radiations

AP-2 Fading and ageing effects of CR-39 PNTDs during ISS space experiments evaluated using reference sample pre-exposed C/Fe heavy ions

Aiko Nagamatsu

C. Nuclear Track Physics and Chemistry 1

CP-9 Emulsion scanning system for double-strangeness nuclei

Junya Yoshida

D. Applications of Nuclear Emulsion

DP-8 Development of cosmic-ray muon radiography analysis system with nuclear emulsions

Kunihiro Morishima

DP-9 Test experiments on muon radiography with emulsion track detectors in Russia

Nina S. Konovalova

DP-10 Automatic analysis of microscopic photo-pictures of undeveloped nuclear emulsions

Valery Anatolievich Ditlov

DP-11 Application of advanced nuclear emulsion technique to fusion plasma neutron diagnostics

Yoichiro Nakayama

DP-12 Development of nuclear emulsion for fast neutron measurement

Shogo Machii

DP-13 Electron identification and energy measurement with Emulsion Cloud Chamber

Nobuko Kitagawa

DP-14 Application of Emulsion Cloud Chamber to cosmic-ray muon radiography

Ryuichi Nishiyama

DP-15 Large Angle Tracking and High Discriminating Tracking in Nuclear Emulsion

Tomokazu Matsuo

H. Neutron Measurements and Analysis 1

HP-6 Research Reactor Operating Power Study with Nuclear Track Metodology

Guillermo Espinosa

HP-8 Research on anisotropy of fusion-produced protons and neutrons emission from high-current plasma-focus discharges

Karol Malinowski

HP-9 Development of Fast Neutron Detection for Dark Matter Search using Nuclear Emulsion

Masahiro Yoshimoto

HP-10 Using average stopping power of recoiled nuclei in determination of the maximum neutron energy of the $^{241}$Am-Be source by superheated drop detector

Peiman Rezaeian

HP-11 Measurement of Thermal Neutron Flux Density at the neutron beam exit of In-hospital Neutron Irradiator

Yiguo Li

HP-12 Outline of new “wide-energy range personal neutron dosemeter (WNP)” using CR-39 nuclear track detector

Wakako Shinozaki

HP-13 Determination of photoneutron dose received by patient from LINAC by CR39 detector

Jong Seo Chai

HP-14 Preliminary results of neutron surveillance at LNF with PADC track detectors

C. Domingo

HP-15 Neutron ambient dose equivalent measurements using PADC detectors around charged particle accelerator workplaces

O. Ortega Gelabert

HP-16 Study of a new neutron dosimeter incorporating RPL detectors

A. Nourreddine

J. Radon Detection and Measurements

JP-14 Negative Correlation between Radon and Lung Cancer: A Possibility of Radiation Hormesis

Krishan Kant Kant

JP-15 Use of CR-39 with different sizes for detecting Rn-222 progeny inside unventilated or poorly ventilated indoor environments

Lucas Antoniassi Pereira

JP-16 Radon and Gas Geochemistry of Ground Water in the Ilan Plain, Northeast Taiwan

Tsanyao Frank Yang

JP-17 Techniques for radon in soil gas measurements by absorption in polycarbonates

Krasimir Krumov Mitev

JP-18 Effectiveness analysis of filters used with radon detectors under extreme environmental conditions for indoor/outdoor long-term exposures.

Victoria Moreno

JP-19 Annual Effective Dose due to Radon, Thoron and their Progeny in dwellings of Aligarh City, and around Thermal Power Station in Aligarh District, U.P., India

Mukesh Kumar

JP-20 Radon Diffusion Studies through Building Construction Materials: Effect of compaction

Anil Kumar Narula

JP-21 A Study of Indoor radon, Thoron Progeny Levels in Some Dwellings by Using SSNTD

Hiranya Kumar Sarma

JP-22 An investigation of $^{226}Ra$ $^{232}Th$ and $^{40}K$, radon exhalation and radiation doses in coal and flyash samples of coal based Thermal Power Plants

Rajesh Kumar

JP-23 Study of indoor radon, thoron in dwelling of Delhi, India using double dosimeter cups with SSNTDS

Anil Sharma

JP-24 Study of natural radioactivity, radon exhalation rate and radiation doses in coal and flyash samples from Rajghat Thermal Power Station, Delhi, India

Lalit Mohan Singh

JP-25 The Effect of Grain Size on Radon Exhalation Rate in Natural-dust and Stone-dust Samples

Raj kumari

JP-26 Radon Chamber Designed for Studying the Behaviour of Radon and its Progeny using the Surface Barrier Detector

Shahid Manzoor

JP-27 Radon doses in the indoor environments of Murree and Islamabad: A comparison of active and passive techniques

Nawab Ali

K. Life Sciences

KP-4 Distribution of radioactivity in fuel-containing materials (Chernobyl "lava") and aerosols from the Chernobyl "Shelter" using combination of CR-39 etching technique and Imaging Plate radiography

Irina Vlasova

KP-5 Development of fully automated colony counter system for the study of low-dose effects on cellular radiobiology

Keisuke Toda

M. Instrumentation and Software

MP-2 New approach of a Nuclear Track counting and analysis system, including software by Digital Image

Guillermo Espinosa

MP-3 Improvement of overlapping nuclear track density measurement by using image processing techniques

Mitra Ghergherehchi

**POSTER (II) 18th Thursday: 17:20 - 18:00 19th Friday: 08:30 - 10:00**

Chair Akira Taniike

B. Nuclear Physics and Chemistry (P4)

BP-6 Fragmentation cross-section of 800 A MeV silicon ions on carbon and polyethylene targets

Jun-Sheng Li

BP-7 Forward-backward emission of target evaporated fragments at high energy nucleus-nucleus collisions

Zhi Zhang

BP-8 Multiplicity fluctuation analysis of target recoiled protons in nucleus-emulsion collisions at a few hundred MeV/nucleon

Tian-Li Ma

BP-9 Determination of deuteron characteristic channeling parameters by simulation of channeling spectrum along Si <100>

Sepideh Shafiei

C. Nuclear Track Physics and Chemistry 2

CP-7 Design and Construction of Optimized Electrochemical Cell and Data Analysis System for Etching of Ion Tracks and Electrodepsition of Nano - and Micro Wires in Porous Ion Tracks Foils

Banin Shakeri jooybari

CP-8 Track overlapping probability and counting statistics for reliable track counting in high density track images

Omid Khayat

CP-10 Fading of Nuclear Tracks in Polycarbonate by UV C light irradiation

M. L. Gisela Saint Martin

CP-11 Influence of intense soft X-ray radiation on parameters of tracks induced in CR-39 and PM-355 solid state detector

Adam Szydlowski

CP-12 Effect of phosphate fertilizers on soil to plant transfer of alpha activity in potato plants

Mahabir Nain

CP-13 Alpha Particle Energy Response of 250 μm Polycarbonate Track Detectors by 50 Hz - HV ECE Method

Mehdi SOHRABI

CP-14 Surface modification of PET films irradiated by keV to GeV ions

Qi Wen

CP-15 Feature of radiation damage formed along the nuclear tracks in bisphenol A polycarbonate films

Ryunosuke Ikenaga

CP-16 A study on polyimide films as an etched track detector with higher registration threshold

Shuichiro Yasuda

CP-17 Quantum yields for loss of carbonate ester bonds in polymeric nuclear track detectors under 222 nm UV radiations

Tomoya Yamauchi

CP-18 Optimization of track etched Makrofol etching conditions for short-term exposure duration

Victoria Moreno

F. Laser Driven Particle Acceleration

FP-3 Effect of laser polarization on proton energy at laser plasma accelerators

Hasan Vosoughian

G. Beam Diagnostic for Hadron Therapy

GP-1 Fragmentation studies of 290 A MeV $^{12}C$ ions with $^{27}Al$ Target with CR-39 Ion Track Detector

Shahid Manzoor

H. Neutron Measurements and Analysis 2

HP-7 Computer simulation of neutron-induced recoil proton tracks developed on etched PADC films

D. Nikezic

I. Materials and Heavy Ions

IP-4 Complementary approach for heavy ion dosimetry with $Ag^{+}$-doped phosphate glasses

Satoshi Kodaira

IP-5 Nickel Ion Beam Induced Modification in the Electrical Conductivity of Cu Nanowires

R P Chauhan

IP-6 Study of SHI irradiation induced modification in thin films of tin oxide

RAJESH KUMAR

IP-7 Micro structural Studies of 145 MeV $Ne^{6+}$ ions induced in Polytetrafluoroethylene (PTFE) polymer

S. Asad Ali Asad

IP-8 Characterization of swift heavy ion induced modification in polymeric material

S. Asad Ali Asad

L. Fission Track Dating and Geology

LP-6 Comparison between fission-track dating determined by LA-ICP-MS and neutron dosimeter through U-doped glass calibrated against U-thin films

Cleber Jose Soares

LP-7 EPIDOTE STANDARD ETCHING FOR FISSION-TRACK ANALYSIS

Julio Cesar Hadler-Neto

LP-8 MICRO-RAMAN SPECTROSCOPIC AND XRD INVESTIGATION OF BRAZILIAN ZIRCON AT DIFFERENT TEMPERATURES

Airton N Coelho Dias

LP-9 Measurment of Radon exhalation Rate in Sand samples from Gopalpur and Rushikulya beach Orissa, Eastern India

Ajay Kumar Mahur

LP-10 Study of radon exhalation rates, natural environmental radioactivity and radiation exposure from Indian commercial granites

M Mishra

LP-11 Radon activity, exhalation rate and radiation doses in coal and fly ash samples collected from NTPC Badarpur, Delhi, India

Keshav Dev Verma

N. Nanotechnology

NP-3 The Strength of track etched membranes and composites polymer/metal obtained on their base by method of matrix synthesis.

Venera N. Gumirova

NP-4 Electrophysical and Gasodynamical properties of polymer films, irradiated with swift heavy ions.

Sergey A. Bedin

NP-5 APPLICATION OF SINGLE MOLECULES SPECTROMICROSCOPY FOR OPTICAL NANODIAGNOSTIC OF ETCHED TRACKS

Ivan Eremchev

NP-6 Synthesis of gold and nanoporous gold nanowires array in etched ion-track membrane templates and fluorescence enhancement of the arrays

Hang Yang

O. Other New Technology

OP-3 Application of CR-39 plastic nuclear track detectors for quality assurance of MOX fuel pellet

Satoshi Kodaira

OP-4 Application of the ion beam graft polymerization method to the thin film diagnosis

Akira Taniike

OP-5 Ablation and Cone Evolution on ArF-Laser Irradiated CR-39

Banin shakeri jooybari