

ANIMMA 2019 – Advancements in Nuclear Instrumentation Measurement Methods and Their Applications

EPJ Web of Conferences Volume 225

Portoroz, Slovenia
17 – 21 June 2019

Editors:

**A. Lyoussi
M. Giot
M. Carette
I. Jenčič**

**C. Reynard-Carette
L. Vermeeren
L. Snoj
P. Le Dû**

ISBN: 978-1-7138-0288-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

This work is licensed under a Creative Commons Attribution 4.0 International License. License details:
<http://creativecommons.org/licenses/by/4.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2020)

For additional information, please contact EDP Sciences – Web of Conferences
at the address below.

EDP Sciences – Web of Conferences
17, Avenue du Hoggar
Parc d'Activité de Courtabœuf
BP 112
F-91944 Les Ulis Cedex A
France

Phone: +33 (0) 1 69 18 75 75
Fax: +33 (0) 1 69 28 84 91

contact-edps@webofconferences.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

SCALP: A DETECTOR FOR (N,α) CROSS-SECTION MEASUREMENTS	1
<i>Lehaut G., Bourgeot M., Galhaut B., Goupillière D., Henri M., Lecolley F. R., Ledoux X., J. Lory, Manduci L., Marie N., Perronnel J., Vandamme Ch.</i>	
TIMEPIX3 LUMINOSITY DETERMINATION OF 13 TEV PROTON-PROTON COLLISIONS AT THE ATLAS EXPERIMENT	6
<i>Sopczak André</i>	
ENERGY CALIBRATION VIA CORRELATION USING AN ADAPTIVE MESH REFINEMENT	8
<i>Maier Daniel, Limousin Olivier, Daniel Geoffrey</i>	
DEEP LEARNING METHODS ON NEUTRON SCATTERING DATA	12
<i>Song Guanghan, Porcar Lionel, Boehm Martin, Cecillon Franck, Dewhurst Charles, Le Goc Yannick, Locatelli Jérôme, Mutti Paolo, Weber Tobias</i>	
CHARACTERISTICS OF 3D PRINTED PLASTIC SCINTILLATOR	18
<i>Kim Dong-Geon, Lee Sangmin, Park Junesic, Son Jaebum, Kim Yong Hyun, Kim Yong Kyun</i>	
READ-OUT ELECTRONICS AND SIGNAL PROCESSING IN GERDA AND FUTURE PROSPECTS	20
<i>D'Andrea Valerio</i>	
THEORETICAL APPROACH TO THE ENERGY RESOLUTION OF A SCINTILLATION SPECTROMETER WITH SEVERAL PHOTODETECTORS	25
<i>Samedov Victor V.</i>	
METU-DEFOCUSING BEAMLINE : A 15-30 MEV PROTON IRRADIATION FACILITY AND BEAM MEASUREMENT SYSTEM	37
<i>Bilge Demirkoz M., Seckin Caner, Avaroglu Akanay, Bulbul Besna, Uslu Pelin, K L C Erinc, Orhan Yusuf, Akcelik Selen, Yigitoglu Merve, Saral Caglar, Uzun Duran Selcen, K L C Ugur, Efthymiopoulos Ilias, Berkay Poyrazoglu An L, Albarodi Abdulrahman, Celik Nazire</i>	
DESIGN AND DEVELOPMENT OF IONIZATION PROFILE MONITOR FOR THE CRYOGENIC SECTIONS OF THE ESS LINAC	44
<i>Benedetti F., Abbon P., Belloni F., Coulloux G., Gougnaud F., Lahonde-Hamdoun C., Le Boulout P., Mariette Y., Marroncle J., Mols J. P., Nadot V., Scola L., Tauzin G., Tarkeshian R., Thomas C.</i>	
INVESTIGATING ARTEFACTS AND REPAIR MECHANISMS ASSOCIATED WITH α-PARTICLE INTERACTIONS IN CHARGE COUPLED DEVICES	52
<i>Newton Rosie, Scott Mike J., Joyce Malcolm J.</i>	
REPORT OF HIGH TEMPERATURE MEASUREMENTS WITH A FABRY-PEROT EXTENSOMETER	56
<i>Cheymol G., Verneuil A., Grange P., Maskrot H., Destouches C.</i>	
SYSTEM NOISE OF A DIGITAL PULSE PROCESSING MODULE FOR NUCLEAR INSTRUMENTATION	60
<i>Ma Y, Fischer W-J., Henniger J., Weinberger D., Kormoll T.</i>	
ROLE OF CHEMICAL SUBSTITUTION IN THE PHOTOLUMINESCENCE PROPERTIES OF CERIUM SAMARIUM TUNGSTATES $\text{Ce}_{(2-x)}\text{Sm}_x(\text{WO}_4)_3$ ($0 \leq x \leq 3$)	64
<i>Derraji K., Favotto C., Valmalette J-C, Villain S., Gavarrri J-R., Nolibé G., Lyoussi A., Guinneton F.</i>	
SELF POWERED NEUTRON DETECTORS WITH HIGH ENERGY SENSITIVITY	66
<i>Fiore S., Aberle O., Angelone M., Calviani M., Di Giambattista F., Lepore L., Nyman M., Pillon M., Plompen A.</i>	
ENHANCEMENT OF IRRADIATION RESISTANCE AND EXPERIMENTAL RESEARCH OF COMPACT ELECTRONICS FOR ITER RADIAL X-RAY CAMERA	71
<i>Chen Kaiyun, Cao Hongrui, Zhao Jinlong, Sheng Xiuli, Li Shi, Hu Liqun</i>	
ANALYSIS OF DD, TT AND DT NEUTRON STREAMING EXPERIMENTS WITH THE ADVANTG CODE	79
<i>Kos Bor, Vasilopoulou Theodora, Mosher Scott W., Kodeli Ivan A., Grove Robert E., Naish Jonathan, Obryk Barbara, Villari Rosaria, Batistoni Paola</i>	
APPLICATION OF FLUORINE-BASED THRESHOLD ACTIVATION DETECTOR FOR NEUTRON FLUX CALCULATION FROM D-T NEUTRON GENERATOR	86
<i>Sibczyński Pawe, Brosawski Andrzej, Burakowski Szymon, Chopik Arkadiusz, Dryll Marek, Dziedzic Andrzej, Gierlik Micha, Grodzicki Krystian, Kajmierzczak Łukasz, Krakowski Tomasz, Niechcielski Kamil, Rzadkiewicz Jacek, Slipshukin Ivan, Trela Krystian, Urban Arkadiusz, Zezuliński Kacper, Iovene Alessandro, Tintori Carlo</i>	
DEVELOPMENT OF A DRIFTLESS JOHNSON NOISE THERMOMETER FOR NUCLEAR APPLICATIONS	89
<i>Pearce Jonathan V., Bramley Paul, Cruickshank David</i>	

APPLICATION OF CDZNTE DETECTORS FOR CONTROL OF INITIAL ENRICHMENT OF FRESH NUCLEAR FUEL AT REFUELING	94
<i>Maslov O. V., Mokritskiy V. A., Sokolov A. V.</i>	
DEVELOPMENT OF A HIGH TEMPERATURE NEUTRON FLUX DETECTOR.....	103
<i>Martin Shaw, Campbell Bradley, Ballantine James, Roberts Kevin</i>	
METHOD FOR PROTOTYPING AND TESTING THE INFORMATION MINIMALISM CONCEPT OF NUCLEAR POWER PLANTS	107
<i>Jang Gwi-Sook, Park Gee-Yong</i>	
CONSIDERATION FACTORS IN APPLICATION OF THERMOCOUPLE SENSORS FOR RCS TEMPERATURE INSTRUMENTATION.....	112
<i>Hwang Inkoo, Cheon Sewoo, Park Wonman</i>	
TEST RESULTS OF AN INNOVATIVE AND MODULAR SENSOR DESIGN FOR FISSION CHAMBER STUDIES.....	116
<i>De Izarra G., Geslot B., Bréaud S., Pepino A., Villard J-F., Filliatre P.</i>	
PREDICTING EX-CORE DETECTOR RESPONSE IN A PWR WITH MONTE CARLO NEUTRON TRANSPORT METHODS.....	122
<i>Goričaneč Tanja, Kotnik Domen, Štancar Žiga, Snoj Luka, Kromar Marjan</i>	
TRITIUM - A QUASI REAL-TIME LOW ACTIVITY TRITIUM MONITOR FOR WATER.....	130
<i>Azevedo C. D. R., Baeza A., Brás M., Cámara T., Cerna C., Chauveau E., Gil J. M., Corbacho J. A., Delgado V., Diaz J., Domange J., Marquet C., Macko M., Martínez-Roig M., Moreno A., Piquemal F., Rodríguez A., Rodríguez J., Roldán, C., Veloso J. F. C. A., Yahlali N.</i>	
IMPACT OF THE CROSS SECTION LIBRARY ON ⁹³MNB ACTIVITY IN VVER-1000 REACTOR DOSIMETRY	138
<i>Haroková P., Lovecký M.</i>	
WIDGET-BASED ALARM RECOGNITION AND A MANAGEMENT SUPPORT INTERFACE SYSTEM IN NUCLEAR POWER PLANTS	142
<i>Lee Seung Min, Park Hana, Jang Gwi Sook, Hwang Inkoo</i>	
NON-DESTRUCTIVE EXAMINATION DEVELOPMENT FOR THE JHR MATERIAL TESTING REACTOR	145
<i>Cornu B., Roure C., Moulin D., Estre N., Tisseur D., Ferroud-Plattet M-P., Kinnunen P., Kotiluoto P., Revuelta A.</i>	
EVALUATION OF LOW DOSE SILICON CARBIDE TEMPERATURE MONITORS.....	153
<i>Davis K. L., Gusarov A., Unruh T. C., Calderoni P., Heidrich B. J., Verner K. M., Al Rashdan A., Lambson A. A., Van Dyck S., Uytdenhouten I.</i>	
NUCLEAR HEATING MEASUREMENTS BY GAMMA AND NEUTRON THERMOMETERS	165
<i>Van Nieuwenhove R., Vermeeren L.</i>	
CONFIRMATION OF NUCLEAR HEATING RATE FOR INSTALLATION OF COLD NEUTRON SOURCE AT HANARO.....	171
<i>Myong-Seop Kim, Byung-Gun Park</i>	
NEUTRONICAL ASPECTS OF A DECAY HEAT MEASUREMENT: THE PRESTO EXPERIMENT	175
<i>Muratori Francesco, Nguyen Frédéric, Gonnier Christian, Le Niliot Christophe, Eschbach Romain</i>	
RADIATION RESISTANCE OF HIGH FREQUENCY ULTRASONIC DEVICES FOR DISTANCE MEASUREMENT IN THE RHF	179
<i>Alaoui Meriem Chriif, Le Clézio, Emmanuel, Despaux Gilles, Calzavara Yoann</i>	
EXPERIMENTAL CHARACTERIZATION OF PCI IMPACT ON VIBRATING FUEL ROD UNDER AXIAL TURBULENT FLOW REPRESENTATIVE OF JHR IRRADIATION DEVICE ADELIN: SET-UP CONCEPTION AND MEASUREMENT METHOD	182
<i>D'Ambrosi Veronica, Breaud Stephane, Destouches Christophe, Ricciardi Guillaume, Lebon Frederic, Sarrouy Emmanuelle, Gatt Jean-Marie, Julien Jerome, Parrat Daniel</i>	
COMPARISON OF THE RESPONSES OF NEW REDUCED-SIZE CALORIMETRIC CELLS MADE OF DIFFERENT STRUCTURE MATERIALS FOR HIGH ENERGY DEPOSITION.....	189
<i>Volte A., Reynard-Carette C., Lyoussi A., Brun J., Carette M.</i>	
CALIBRATION OF A SINGLE-CELL CALORIMETER IN A NEW TRANSIENT-STATE TEST BENCH.....	194
<i>Burn J., Reynard-Carette C., Carette M., Lyoussi A., Volte A., Tarchalski M., Prokopowicz R.</i>	
PERFORMANCE OF CUSTOM-MADE VERY HIGH TEMPERATURE THERMOCOUPLES IN THE ADVANCED GAS REACTOR EXPERIMENT AGR-5/6/7 DURING IRRADIATION IN THE ADVANCED TEST REACTOR.....	199
<i>Palmer A. J., Skifton R. S., Scervini M., Haggard D. C., Swank W. D.</i>	
PERSPECTIVE LIQUID SCINTILLATORS FOR SPECTROMETRY OF NEUTRON AND GAMMA RADIATION.....	207
<i>Mahmoud Kawa Haji, Prenosil Vaclav, Matej Zdenek, Kucera Frantisek, Mravec Filip, Kostal Michal, Cvachovec Frantisek, Valis David</i>	

ACOUSTIC INSTRUMENTATION OF THE NEW GENERATION OF MTR: EFFECT OF NUCLEAR RADIATION ON MODIFIED BISMUTH TITANATE PIEZOELECTRIC ELEMENTS	211
<i>Ferrandis Jy., Gatsa O., Combette P., Fourmentel D., Destouches C., Radulovic V., Snoj L.</i>	
INVESTIGATION OF THE NEUTRON-GAMMA RAY DISCRIMINATION PERFORMANCE AT LOW NEUTRON ENERGY OF A SOLUTION-GROWN STILBENE SCINTILLATOR.....	219
<i>Di Chicco Augusto, Petit Michael, Jacqmin Robert, Gressier Vincent, Stout Brian</i>	
CONCEPTUAL DESIGN OF IRRADIATION FACILITY WITH 6 MEV AND 7 MEV GAMMA RAYS AT THE JSI TRIGA MARK II RESEARCH REACTOR.....	224
<i>Žohar Andrej, Pungerèè Anže, Ambrožič Klemen, Radulovič Vladimir, Jazbec Anže, Rupnik Sebastjan, Lengar Igor, Snoj Luka</i>	
THERMOCOAX RHODIUM SPND SENSITIVITY DISPERSION AND VALIDATION OF THE SENSITIVITY CALCULATION MODEL	230
<i>Vermeeren L., Lysen W., Pichon L., Salou V., Helleux G.</i>	
DESIGN AND SIMULATION OF GAMMA SPECTROMETRY EXPERIMENTS IN THE CROCUS REACTOR	235
<i>Pakari O., Lamirand V., Vandereydt B., Vitullo F., Hursin M., Kong C., Pautz A.</i>	
COMPARISON OF NEUTRON/GAMMA SEPARATION QUALITIES OF VARIOUS ORGANIC SCINTILLATION MATERIALS	241
<i>Matij Zdenik, Mravec Filip, Janěš Aleš, Košál Michal, Kuěra František, Cvachovec František, Pøenosil Václav, Kopecký Zdenik, Ěulen Jiř</i>	
DEVELOPING AND TESTING A MINIATURE FIBER-COUPLED SCINTILLATOR FOR IN-CORE NEUTRON COUNTING IN CROCUS	244
<i>Vitullo Fanny, Lamirand Vincent, Mosset Jean-Baptiste, Frajtag Pavel, Pakari Oskari, Gregory Perret, Pautz Andreas</i>	
BUILDING AND USE OF INFRASTRUCTURE FOR DETECTOR DEVELOPMENT AND TESTING AT VR-1 REACTOR FACILITY	252
<i>Bily Tomas, Rataj Jan, Huml Ondrej</i>	
THE COLIBRI EXPERIMENTAL PROGRAM IN THE CROCUS REACTOR: CHARACTERIZATION OF THE FUEL RODS OSCILLATOR.....	255
<i>Lamirand Vincent, Frajtag Pavel, Godat Daniel, Pakari Oskari, Laureau Axel, Rais Adolfo, Hursin Mathieu, Hursin Grégory, Fiorina Carlo, Pautz Andreas</i>	
IN-CORE DOSIMETRY FOR THE VALIDATION OF NEUTRON SPECTRA IN THE CROCUS REACTOR	260
<i>Jiang Y., Laureau A., Lamirand V., Frajtag P., Pautz A.</i>	
POWER CALIBRATION METHODOLOGY AT THE CROCUS REACTOR.....	266
<i>Lamirand Vincent, Laureau Axel, Pakari Oskari, Frajtag Pavel, Pautz Andreas</i>	
NEUTRON NOISE EXPERIMENTS IN THE AKR-2 AND CROCUS REACTORS FOR THE EUROPEAN PROJECT CORTEX.....	271
<i>Lamirand Vincent, Rais Adolfo, Hübner Sebastian, Lange Carsten, Pohlus Joachim, Paquee Uwe, Pohl Christoph, Pakari Oskari, Frajtag Pavel, Godat Daniel, Hursin Mathieu, Laureau Axel, Perret Grégory, Fiorina Carlo, Pautz Andreas</i>	
USAGE OF MULTIPLE FISSION CELLS FOR NEUTRON FLUX MEASUREMENTS DURING ROD-INSERTION METHOD.....	277
<i>Lengar Igor, Rupnik Sebastjan, Žohar Andrej, Merljak Vid, Kromar Marjan, Snoj Luka</i>	
UTILIZATION OF A ZERO POWER REACTOR FOR EXAMINATION OF OPERATOR INFLUENCE ON REACTOR CONTROL	282
<i>Bily Tomas, Alice Darbyshire, Huml Ondrej</i>	
VALIDATION OF NEUTRON EVALUATED DATA BASED ON THE EXPERIMENTAL REACTIVITY WORTH OF TUNGSTEN TARGET IN CIADS.....	286
<i>Jiang Wei, Gu Long, Zhang Lu, Zhou Qi, Chen Liang, Li Jin-Yang, Yu Rui, Zhu Qing-Fu, Dai Yong</i>	
UTILISATION OF JSI TRIGA PULSE EXPERIMENTS FOR TESTING OF NUCLEAR INSTRUMENTATION AND VALIDATION OF TRANSIENT MODELS.....	291
<i>Vavtar Ingrid, Pungerèè Anže, Snoj Luka</i>	
COMPARISON OF NEUTRON/GAMMA SEPARATION QUALITIES OF VARIOUS ORGANIC SCINTILLATION MATERIALS	298
<i>Matij Zdenik, Mravec Filip, Janěš Aleš, Košál Michal, Kuěra František, Cvachovec František, Pøenosil Václav, Kopecký Zdenik, Ěulen Jiř</i>	
PERFORMANCE ASSESSMENT OF AMPLIFICATION AND DISCRIMINATION ELECTRONIC DEVICES FOR PASSIVE NEUTRON MEASUREMENTS.....	301
<i>Ben Mosbah M., Eleon C., Passard C., Loridon J., Perot B., Barbot L., Grassi G.</i>	
IMPROVED ELECTRONICS FOR ³HE BASED NEUTRON COUNTERS	307
<i>Boogers Eric, Borella Alessandro, Rossa Riccardo</i>	

THE USE OF SELF-INDUCED X-RAY FLUORESCENCE IN GAMMA-RAY SPECTROSCOPY OF URANIUM ORE SAMPLES.....	311
<i>Marchais T., Pérot B., Carasco C., Ma J-L., Allinei P-G., Toubon H., Goupillou R., Collot J.</i>	
STUDY OF GAMMA-RAY BACKGROUND NOISE FOR RADIOACTIVE WASTE DRUM CHARACTERIZATION WITH PLASTIC SCINTILLATORS.....	317
<i>Bottau V., Tondut L., Allinei P. G., Perot B., Eleon C., Carasco C., De Stefano R., Faussier G.</i>	
NEUTRON SPECTROMETRY AT LOW FLUENCE RATES FOR RADIATION PROTECTION AT THE AMANDE FACILITY	322
<i>Lacoste V., Petit M., Gressier V.</i>	
PERSPECTIVE LIQUID SCINTILLATORS FOR SPECTROMETRY OF NEUTRON AND GAMMA RADIATION.....	327
<i>Haji Mahmoud Kawa, Prenosil Vaclav, Matej Zdenek, Kucera Frantisek, Mravec Filip, Kostal Michal, Cvachovec Frantisek, Valis David</i>	
ESTIMATION OF FISSILE MATERIAL CONTENT IN IRRADIATED IN-PILE SECTIONS USING NEUTRON COINCIDENCE COUNTERS	330
<i>Rossa Riccardo, Borella Alessandro, Boden Sven, Broeckx Wouter</i>	
THE REMOTE-CONTROLLED SPECTROMETRIC SYSTEM FOR SEARCHING AND CHARACTERIZATION OF HIGH-LEVEL RADIOACTIVE WASTE.....	335
<i>Danilovich Alexey, Potapov Victor, Smirnov Sergey</i>	
CALORIMETRIC NON-DESTRUCTIVE ASSAY OF LARGE VOLUME AND HETEROGENEOUS RADIOACTIVE WASTE DRUMS.....	339
<i>Kubinski W. R., Carasco C., Kikola D., Mathonat C., Ricard D., Tefelski D., Tietze-Jaensch H.</i>	
DESIGN BY NUMERICAL SIMULATION OF AN IN SITU ALPHA SPECTROMETER OPERATING AT AMBIENT AIR PRESSURE	344
<i>Degrelle D., Venara J., Ben Mosbah M., Cuozzo M., Mahé C., Serrano R.</i>	
RADIOACTIVE HOT-SPOT DETECTION USING UNMANNED AERIAL VEHICLE SURVEILLANCE.....	352
<i>Brouwer Yoeri, Vale Alberto, Macedo Duarte, Gonçalves Bruno, Fernandes Horário</i>	
COMPTON IMAGING RECONSTRUCTION METHODS: A COMPARATIVE PERFORMANCE STUDY OF DIRECT BACK-PROJECTION, SOE, A NEW BAYESIAN ALGORITHM AND A NEW COMPTON INVERSION METHOD APPLIED TO REAL DATA WITH CALISTE	360
<i>Daniel G., Limousin O., Maier D., Meuris A., Carrel F.</i>	
SIMULATION OF DELAYED GAMMA RAYS FROM NEUTRON-INDUCED FISSIONS USING MCNP 6.1	368
<i>De Stefano R., Pérot B., Carasco C., Simon E.</i>	
NON-DESTRUCTIVE ASSAY OF NUCLEAR WASTE CONTAINERS USING MUON SCATTERING TOMOGRAPHY IN THE HORIZON2020 CHANCE PROJECT	374
<i>Kopp Anna, Alrheli Ahmad, Kiko A Daniel, Mhaidra Mohammed, Stowell Patrick, Tietze-Jaensch Holger, Thompson Lee, Velthuis Jaap, Weekes Michael</i>	
FAST NEUTRON AND γ-RAY BACKSCATTER RADIOGRAPHY FOR THE CHARACTERIZATION OF CORROSION-BORN DEFECTS IN OIL PIPELINES	378
<i>Licata Mauro, Parker Helen M. O., Aspinall Michael D., Bandala Manuel, Cave Frank, Conway Sebastian, Gerta Domas, Joyce Malcolm J.</i>	
IMPROVING ACTIVITY ESTIMATION IN PASSIVE GAMMA SCANNING FOR RADIOACTIVE WASTE DRUMS.....	382
<i>Vax E., Marcus E., Mazor T., Kadmon Y., Osovizky A.</i>	
ACTIVE NEUTRON MONITORING OF NUCLEAR FUEL CYCLE FISSILE MATERIALS	385
<i>Batyaev V. F., Karetnikov M. D., Sklyarov S. V.</i>	
ASSESSMENT OF THE IMPACT OF SELECTED CHANGES IN THE DEEP GEOLOGICAL REPOSITORY MODEL ON ITS LONG-TERM SAFETY	389
<i>Flamíková Dorota, Nečas Vladimír</i>	
PRELIMINARY STUDY ON IMPROVING RESOLUTION OF D-T NEUTRON RADIOGRAPHY BASED ON ASSOCIATED ALPHA AND CODED SOURCE IMAGING METHODS	396
<i>Wang Sheng, Wu Yang, Huo Heyong, Li Hang, Wu Chunlei, An Li, Tang Bin, Li Zhenghong</i>	
DESIGN AND OPTIMISATION OF A THREE LAYERS THERMAL NEUTRON, FAST NEUTRON AND GAMMA-RAY IMAGING SYSTEM.....	400
<i>Al Hamrashdi H., Monk S. D., Cheneler D.</i>	
IMAGE TEXTURE ANALYSIS AND COLORIMETRY FOR THE CLASSIFICATION OF URANIUM ORE CONCENTRATE POWDERS	407
<i>Marchetti Mara, Mayer Klaus, Wallenius Maria, Bulgheroni Antonio, Wiss Thierry, Lützenkirchen Klaus, Fongaro Lorenzo</i>	

APPLICATION OF CDZNTE QUASI-HEMISPHERICAL DETECTORS IN STRONG GAMMA-RADIATION FIELDS	413
<i>Loutchanski Anatoli, Fjodorovs Viktors, Ivanov Victor, Ogorodniks Vadims</i>	
MODULAR AND INTEGRATED SENSOR NETWORK OF INTELLIGENT RADIATION MONITOR SYSTEMS FOR RADIOLOGICAL AND NUCLEAR THREAT RESPONSE	417
<i>Corbo M., Morichi M., Fanchini E., Mini G., Pepperosa A., Mangiagalli G.</i>	
A NOVEL PORTABLE DEVICE FOR GAMMA AND NEUTRON SPECTROSCOPY WITH SPECIAL NUCLEAR MATERIAL IDENTIFICATION	423
<i>Morichi Massimo, Fanchini Erica, Mangiagalli Giacomo</i>	
E-SICURE COLLABORATION PROJECT: SILICON CARBIDE MATERIAL STUDIES AND DETECTOR PROTOTYPE TESTING AT THE JSI TRIGA REACTOR.....	427
<i>Radulovic Vladimir, Ambrožič Klemen, Snoj Luka, Capan Ivana, Brodar Tomislav, Ereš Zoran, Pastuović Željko, Sarbutt Adam, Ohshima Takeshi, Yamazaki Yuichi, Coutinho José</i>	
TESTING AND PERFORMANCES OF SPECTROSCOPIC RADIATION PORTAL MONITOR FOR HOMELAND SECURITY	433
<i>Deyglun C.</i>	
DEVELOPMENT OF A COATED-MICRO-PARTICLE NEUTRON DETECTOR BASED ON LIF/ZNS SCINTILLATOR	440
<i>Logoglu Faruk, Flaska Marek, Wolfe Douglas E.</i>	
CHARACTERIZATION OF NEUTRON DETECTION SYSTEMS WITH CONFIDENCE VIA STATISTICAL PARAMETER CORRECTION	446
<i>Boone Phillip</i>	
MEASUREMENTS AND SIMULATIONS TO INVESTIGATE THE FEASIBILITY OF NEUTRON MULTIPLICITY COUNTING IN THE CURRENT MODE OF FISSION CHAMBERS	454
<i>Nagy Lajos, Pázsit Imre, Pál Lénárd, Klujber Gergely, Szieberth Máté</i>	
OPTIMIZATION OF NEUTRON DETECTION MODULE BASED ON LI-GLASS SCINTILLATOR AND AN ARRAY OF SIPMS	462
<i>Wengrowicz Udi, Osovizky Alon, Ocherashvili Aaron, Ginzburg Dimitry, Ifergan Yair, Volasky Eli, Kadmon Yagil, Raveh Avi, Orion Itzhak</i>	
ON LINE MEASUREMENT OF ORGANIC IODINE DURING A SEVERE NUCLEAR ACCIDENT	465
<i>Chebhi M., Doizi D., Manceron L., Perrin A., Vander Auwera J., Kwabia Tchana F.</i>	
USING LASER REMOTE HEATING TO SIMULATE EXTREME THERMAL HEAT LOADS ON NUCLEAR FUELS	468
<i>Vidal T., Gallais L., Fauchaux J., Capdevila H., Pontillon Y.</i>	
STUDY OF ONLINE MEASUREMENTS TECHNIQUES OF METALLIC PHASE SPATIAL DISTRIBUTION INTO A CORIUM POOL	473
<i>Tisseur D., Cavarro M., Rey F., Paumel K., Chikhi N., Delacroix J., Fouquart P., Le Tellier R., Bouyer V.</i>	
REMOTE MONITORING OF MOLTEN CORE-CONCRETE INTERACTION EXPERIMENT WITH OPTICAL FIBRE SENSORS & PERSPECTIVES TO IMPROVE NUCLEAR SAFETY – DISCOMS PROJECT	477
<i>Maurin L., Ferdinand P., Bouyer V., Denoix A., Jouvin G., Rougeault S., Journeau C., Molina D., Tena P., Querdane Y.</i>	
MEASUREMENT OF REACTOR CORE TEMPERATURE USING MULTISPECTRAL INFRARED PYROMETRY IN ACCIDENTAL CONDITIONS	485
<i>Ladaci A., Cheymol G., Maskrot H., Destouches C., Ferry L., Gonnier C.</i>	
TESTS UNDER IRRADIATION OF OPTICAL FIBERS AND CABLES DEVOTED TO CORIUM MONITORING IN CASE OF SEVERE ACCIDENT IN A NUCLEAR POWER PLANT	487
<i>Cheymol G., Maurin L., Remy L., Arounassalame V., Maskrot H., Rougeault S., Dauvois V., Le Tutour P., Huot N., Querdane Y., Ferdinand P.</i>	
COMPARATIVE EVALUATION OF THREE WIRELESS SENSOR NETWORK TRANSCEIVERS IN A HIGH RADIATION ENVIRONMENT.....	493
<i>Huang Q., Jiang J., Deng Y. Q.</i>	
UNMANNED RADIATION MONITORING SYSTEM	498
<i>Lüley Jakub, Vrbán Branislav, ěerba Štefan, Osuský Filip, Nečas Vladimír</i>	
THE POTENTIAL OF PHOTON ACTIVATION AND NEUTRON ACTIVATION TECHNIQUES FOR FAST SOIL CHARACTERIZATION	503
<i>Sari Adrien, Garti Sara, Lainé Frédéric, Carrel Frédéric, Dumazert Jonathan, Makil Hamid, Dufour Nicolas, Mougél Caroline, Masset Adeline, Mondon Lucile, Boutillon Laurent, Lejeune Jean-Pierre</i>	
MAPSSIC, A COMMUNICATING MAPS-BASED INTRACEREBRAL POSITRONS PROBE FOR DEEP BRAIN IMAGING IN AWAKE AND FREELY-MOVING RATS	509
<i>Gensolen F., Ammour L., Bautista M., Heymes J., Fieux S., Kachel M., Lefebvre F., Pangaud P., Pinot L., Lanièce P., Baudot J., Gisquet P., Zimmer L., Verdier M-A., Morel C.</i>	

PRODUCING USEFUL CHEMICALS USING A NUCLEAR REACTOR	514
<i>Plant Arran George, Najdanovic-Visak Vesna Dr, Joyce Malcolm J. Professor, Snoj Luka Dr, Jazbec Anže</i>	
PRACTICAL DEMONSTRATIONS – KEY TO EFFICIENT EXPLANATIONS OF RADIOACTIVITY TO PUPILS AND STUDENTS	518
<i>Koželj Matjaž, Slapar Borišek Vesna, Istenič Radko</i>	
A NEW PROJECT DEDICATED TO DEVELOPING INTERNATIONAL MOBILITY OF APPRENTICES IN THE MASTER’S DEGREE IN INSTRUMENTATION, MEASUREMENT AND METROLOGY (MOBIL-APP PROJECT).....	522
<i>Reynard-Carette C.</i>	
COSICAF, A FISSION CHAMBER SIMULATION TOOL FOR ACADEMIC PURPOSES.....	527
<i>De Izarra G., Lamotte M., Bréaud S., Pépino A., Filliatre P., Jammes C.</i>	
INTERNATIONAL SCHOOL FOR RADIATION MEASUREMENTS IN ASIA	533
<i>Nomachi Masaharu, Vo Hong Hai</i>	
Author Index	