

International
**Nuclear Sciences and
Technologies**
Conference



19-22 October 2022

Pine Bay Holiday Resort Kuşadası, AYDIN - TURKEY



Programme

19 October 2022

Hall 1		Hall 2	
09:30-10:00		Registration	
10:00-10:30		Opening Ceramony	
10:30-10:45		Coffee Break	
Session Chairs: Prof.Dr. Santosh Kumar SAR			
10:45-11:15		Invited Lecture 1 Research and Development Studies of Tenmak Proton Accelerator Facility Prof. Dr. İsmail BOZTOSUN	
11:15-11:45		Invited Lecture 2 Polonium Turnaround in the Environment: Risks and Dose Implications Dr. Saif UDDIN	
11:45-12:00		Foto	
12:00-13:30		Lunch	
Hall 1		Hall 2	
Session Chairs: Prof.Dr. Dimitar TONEV, Prof.Dr. Aysun UĞUR GÖRGÜN		Session Chairs: Assoc.Dr. Şenol SERT, Dr. Elena GELEVA	
13:30-13:45	Dispersion of Radionuclides and Heavy Metals from Phosphogypsum Stacks in Soil and Plants	Fotini Noli	Post-Radiation Effects In The Olefine-Containing Systems Islam Mustafayev
13:45-14:00	Continuous ground measurements in Rila Mountain by INRNE-BAS	Nina Nikolova	Low-Carbon Radiation-Chemical Processes Of Oil- Refining Islam Mustafayev
14:00-14:15	Mechanical and Elastic Properties of Alternative Glass Compositions for Waste Vitrification by Ultrasonic Technique	Sema Erentürk	The use of radioanalytical techniques based on neutron activation analysis for the detection and identification of seized Jozef Sabol

			smuggled drugs	
14:15-14:30	Investigation of Natural Radioactivity in Drinking Water Sources in South-Central Bulgaria	Elena Geleva	The role of radiation protection in ensuring safe applications of nuclear sciences and technologies	Jozef Sabol
14:30-14:45	The role of pre-sowing irradiation in the development of seeds of <i>Cicer arietinum</i> L. in the conditions of salt stress	Elimkhan Jafarov	Generators of tagged neutrons - current state of art and applications	Maxim Karetnikov
14:45-15:00	A Study on Adsorption Kinetic Models for ²⁰⁹ Po Removal from Aqueous Solution using Natural Zeolite	Ümran Hiçsönmez	Aerial Monitoring System for Radiation Detection	Ali Akgöz
15:00-15:15	Coffee Break			
	Session Chairs: Prof.Dr. Yüksel ALTAŞ, Prof.Dr. Fotini NOLİ	Session Chairs: Prof.Dr. Rasim İPEK, Assoc.Prof.Dr. Mutlu İÇHEDEF		
15:15-15:30	Bark Functionalized Magnetite Bio-composite As Promising Adsorbent For Adsorptive Extraction Of U(VI) From Water	Ms. Poonam Deshmukh	The role of low molecular weight antioxidants in the adaptation of <i>Alhagi pseudalhagi</i> to chronic gamma irradiation	Elimkhan Jafarov
15:30-15:45	Using PET wastes as an adsorbent for Ce and Sr removal from aqueous solution	Senol Sert	TENMAK-NUKEN, PROTON ACCELERATOR FACILITY (PAF) SET-UP OF AN IRRADIATION AND MEASUREMENT SYSTEM FOR NON-DESTRUCTIVE ION BEAM ANALYSIS TECHNIQUES (PIXE, PIGE, RBS, ERDA,	Dilaver Porsuk

			NRA) AND R&D IRRADIATION SERVICES	
15:45-16:00	Determination and Extraction of Th(IV) in Sand Samples with Fixed-Bed Column Technique	Neha Verma	The Medico-Biological Effects of Ionizing Radiation, Caused by the Chernobyl Nuclear Accident	Coretchi Liuba
16:00-16:15	^{99m} Tc[Tc]-DPA PA-conjugated cubic Fe ₃ O ₄ nanoparticles: Synthesis, Radiolabeling and in Vitro Affinities on Prostate Cancer Cells	Volkan Yasakçı	Assessment of the ASTEC Model of a Generic BWR-4 Mark-1 Peach Bottom Unit-2 NPP and Analysis of the ST-SBO Severe Accident Scenario	Onur Murat
16:15-16:30	Determination of optimum conditions for the extraction and separation of lanthanum, cerium, yttrium and thorium using Taguchi method	Abdoul Rachid Chaibou Yacouba	QUANTIFYING THE EFFECT OF WILDFIRE ON SOIL ELEMENT CONCENTRATIONS IN MEDITERRANEAN	Ayse Nur Esen
16:30-16:45	Application of Greek Minerals for Eu, Cs and Co-removal from Aqueous Solutions; The Effect of Irradiation	Iro Dianellou		

20 October 2022

	Hall 1
	Session Chairs: Prof.Dr. İslam MUSTAFAYEV
09:30-10:00	Invited Lecture 3 Bark Functionalized Magnetite Bio-composite As Promising Adsorbent For Adsorptive Extraction Of U(VI) From Water Prof. Dr. Santosh Kumar SAR
10:00-10:30	Invited Lecture 4 Short Range Particles Emitters (α and Auger Electrons) in Radionuclide Therapy Prof. Dr. Aleksander BILEWICZ
10:30-10:45	Coffee Break

	Session Chairs: Dr. Saif UDDIN, Prof.Dr. Sema ERENTÜRK		
10:45-11:15	Molten Salt Reactor: A 4th Generation SMR and its Fuel Cycle, Dr. Reşat UZMEN - FİGES A.Ş		
	Hall 1		Hall 2
	Session Chairs: Dr. Saif UDDIN, Prof.Dr. Sema ERENTÜRK		Session Chairs: Prof.Dr. Cem GÖK, Kamil WAWROWICZ
11:15-11:30	The amenability of the low-grade uranium ores in central Jordan to uranium leaching	Mohammad Alnaief	The role of low molecular weight antioxidants in the adaptation of Alhagi pseudalhagi to chronic gamma irradiation Elimkhan Jafarov
11:30-11:45	Evaluation of uranium separation and concentration from the alkaline leach solution of Jordanian ore using a commercial resin	Mohammad Alnaief	Determination of the Radiological Consequences of a LBLOCA with SBO Severe Accident by means of the ASTEC and JRODOS codes at a generic Akkuyu VVER-1000 plant unit Ahmet Kağan Mercan
11:45-12:00	Investigation of the Effect of Fuel Type and Reflector Material on Neutronic Performance in Molten Salt Reactors	Meryem Seferinoglu	Nuclear Safety and Security Culture Development in Newcomers Bahire Gül Göktepe
12:00-13:30	Lunch		
	Hall 1		Hall 2
13:30-17:00	Social Program		Social Program
	Session Chairs: For Thematic Meeting Prof.Dr. Aysun UĞUR GÖRGÜN		
21.00	Thematic Meeting-Women in Nuclear-TURKEY B. Gül GÖKTEPE		
21 October 2022			
09:30-17:00	Poster Presentation Session Chairs: Dr. Caner TAŞKÖPRÜ, Dr. Özge KOZGUŞ GÜLDÜ, Dr. Berkan ÇETİNKAYA, Prof.Dr. Islam MUSTAFAYEV, Prof.Dr. Saif UDDIN		
	Hall 1		

	Session Chairs: Dr. Anguel DEMERDJIEV, Assoc.Prof.Dr. Banu YOHO			
09:30-10:00	Invited Lecture 5 Unusual Thermoluminescence Behaviour for Rare Earth Doped Phosphors and its Possible Dosimetric Applications Prof. Dr. Nurdoğan CAN			
	Hall 1		Hall 2	
	Session Chairs: Dr. Anguel DEMERDJIEV, Assoc.Prof.Dr. Banu YOHO		Session Chairs: Prof.Dr. Sabriye YUŞAN, Dr. Michael Duncan YOHO	
10:00-10:15	PROFICIENCY TESTS ON THE DETERMINATION OF RADIOACTIVITY IN FOOD AND ENVIRONMENTAL SAMPLES ORGANIZED IN POLAND	Leon Fuks	Evaluation of the 222Rn And CO2 Anomalies around a Quaternary Fault system: Pınarbaşı segment of the Izmir Fault	Mutlu İçhedef
10:15-10:30	REMOVAL OF RADIONUCLIDES FROM THE RADIOACTIVELY CONTAMINATED WATER BY SORPTION AND SORBENT-ASSISTED ULTRAFILTRATION	Leon Fuks	Geochemical characteristics of 222Rn And CO2 within the Izmir and Bornova Fault	Meryem Moustakim
10:30-10:45	Coffee Break			
	Session Chairs: Prof.Dr. İsmail BOZTOSUN, Dr.Rafal WALCZAK		Session Chairs: Prof.Dr. Ümran HİÇSÖNMEZ, Prof.Dr. Sevilay HACIYAKUPOĞLU	
10:45-11:00	Preparation of Gd-doped metal oxide nanofiber composite adsorbents by electrospun method and radionuclide adsorption applications	Umit H. Kaynar	RISK ASSESSMENT OF MARINE RADIOECOLOG Y AND, TRACE ELEMENTS VIA ANTIOXIDANTS	Nurdan Akakçe
11:00-11:15	Characterization and Luminescent Properties of Natural Amazonite	Eren C. Karsu Asal	Isotopic Composition of Environmental Water Samples from Sava River Basin in Croatia and Serbia	Natasa Todorovic
11:15-11:30	Indoor Radon (222Rn) Measurements	Fatma Tezcan	RADON RETENTION CAPACITIES OF	Ceren Gündoğdu

	and Assessment of Human Risk in the Dwellings of Edirne (Türkiye)		METAL-ORGANIC FRAMEWORKS (MOFs)	
11:30-11:45	OSL Dating of a 150-Year-Old Cultural Heritage in Turkey	Pınar Çelik	The Radionuclide Content of Thermal Water in Azerbaijan	Amina Mikayilova
11:45-12:00				
12:00-13:30	Lunch			
	Hall 1			
	Session Chairs: Prof.Dr. Serap TEKSÖZ, Assoc.Prof.Dr. Emin İlker MEDİNE			
13:30-14:00	Invited Lecture 6 Radiotheranostics: A Bridge Through Radiochemistry to Nuclear Medicine Prof. Dr. Perihan ÜNAK			
	Hall 1		Hall 2	
	Session Chairs: Prof.Dr. Serap TEKSÖZ, Assoc.Prof.Dr. Emin İlker MEDİNE		Session Chairs: Prof.Dr. Şule AYTAŞ, Prof.Dr. Agnieszka MAJKOWSKA	
14:00-14:15	Comparison of Peptide Radiolabelling with Gallium-68: NOTA vs. DO3A	Aynil Çetin	Separation of Neodymium and Dysprosium from Aqueous Solution Using Tin Phosphate	Murat Şentürk
14:15-14:30	201Tl production process	Berna Yıldız Akdağ	Adsorption of uranium ions from aqueous solutions by graphene-based zinc oxide nanocomposites	Ikbal Gozde Kaptanoglu
14:30-14:45	Antitumor Activity of Bromelain-Loaded Niosomes in Cancer Cells	Ezgi Tut	Synthesis of Activated Carbon-Nickel Oxide Nanocomposites and Investigation of its Performance in Immobilization of Uranium Ions via Adsorption Process	Cansu Endes Yilmaz
14:45-15:00	Radioactivity Mediated Horizontal Gene Transfer	Nazima Habibi	Opium Poppy Oil and Alginate Bigel System for	Cem Gök

	of Antibiotic Resistant Genes		Neodymium Recovery	
15:00-15:15	Coffee Break			
	Session Chairs: Prof.Dr. Mahmut A.A. ASLANİ, Assoc.Prof.Dr. Çiğdem İÇHEDEF		Session Chairs: Assoc.Prof.Dr. Berkay CAMGÖZ, Assoc.Prof.Dr. Süleyman İNAN	
15:15-15:30	Evaluation of In Vitro Anti-Prostate Cancer Effects of Camptothecin Loaded Mesoporous Silica Nanoparticles	Özge Kozguş Güldü	PREPARATION OF XYLENOL ORANGE AND ALGINAT BASED COMPOSITE TO DETECT STRONTIUM USING RGB COORDINATE METHOD	Alparslan Enes Oral
15:30-15:45	Cell Incorporation Studies of [^{99m} Tc]-6-mercaptopurine on MCF-7, A-549 and HT-29 Cell Lines	Meliha Ekinci	Adsorption of Lead Isotopes from Aqueous Solutions Using Clay Minerals	Gaye Ozgur Cakal
15:45-16:00	Investigation of Radiation Doses Emitted by Patients Injected ¹⁸ F-FDG in PET/CT	Ahmet Murat Şenışık	Adsorption of Strontium and Cesium from Aqueous Solutions Using Natural, Synthetic and Modified Zeolites	Gaye Ozgur Cakal
16:00-16:15	The Exchange Of Radon Gas Concentration Along Manisa Fault	Caner Taskopru	An Investigation of Radiation Shielding Performance of Glass Ceramics for Different Applications	Sema Akyıl Erentürk
16:15-16:30	Use of The Fallout Radionuclides Technique for Soil Erosion Assessment in Northwest Morocco and in Western Turkey	Meryem Moustakim	Status of Simulations for the INRNE-BAS Cyclotron Facility	Anguel Demerdjiev
16:30-16:45	Environmental Assessment of Natural Radionuclides	Banu Yoho	Investigation of the Effects of Some Experimental	Engin Aşlar

	and Trace Elements Around Seyitömer Coal Fired Power Plant		Factors on Radiation Beam Intensity in Mammography	
16:45-17:00	Effect Of Ionizing Radiation On TSD Spectra Of P(VDF-TeFE)/Si Composites	Revan Mehdiyeva		
22 October 2022				
	Hall 1			
	Session Chairs: Prof. Dr. Perihan ÜNAK			
09:30-10:00	Invited Lecture 7 Integrating Nanomedicine and Imaging: from Bench to Bedside! Prof. Dr. Ömer ARAS			
	Hall 1		Hall 2	
	Session Chairs: Prof. Dr. Perihan ÜNAK		Session Chairs: Assoc. Prof. Dr. Elçin EKDAL KARALI, Assoc. Prof. Dr. Banu YOHO	
10:00-10:15	Radiolabeled Lapatinib (LPT) and Its PLGA Formulation as Potential Radiotracers	Kadriye Buşra Karatay	Monte Carlo Study on BeO OSL Dosimetry for Clinical Dosimetric Measurements	Esil Kara
10:15-10:30	Radiolabeled Antiepileptic Drug: [99mTc] Tc-Zonisamide	Emine Dervis	GEANT4 Based Monte-Carlo Simulation Studies for Radiation Detection Purposed Detector Design at TENMAK-NÜKEN	Alper Nazmi Yüksel
10:30-10:45	Coffee Break			
	Session Chairs: Prof. Dr. F. Zümrüt BİBER MÜFTÜLER, Prof. Dr. Jozef SABOL		Session Chairs: Assoc. Prof. Dr. Elçin EKDAL KARALI, Assoc. Prof. Dr. Banu YOHO	
10:45-11:00	IN VITRO EVALUATION OF RADIOLABELED METHOTREXATE LOADED MAGNETIC NANOPARTICLE DELIVERY SYSTEM	Oğuz Çetin	Modelling Radiation Damage for the Mechanical Integrity of Spent Fuel Element :Multiscale Microstructure Evolution Approach	Neslihan Yanikömer

11:00-11:15	Antimicrobial Photodynamic Therapy Using ICG Loaded FDG Conjugated Superparamagnetic Iron Oxide (Fe ₃ O ₄) Nanoparticles	Önder Bakır	Numerical Modeling of Groundwater Radionuclide Transport with Finite Difference Based Method of Lines	Tayfun Tanbay
11:15-11:30	SYNTHESIS, RADIOLABELING AND IN VITRO EVALUATION OF AZATHIOPRINE LOADED MAGNETIC SOLID LIPID NANOPARTICLES	Burcu Güngör	Investigation of Nanocomposites Efficiency on the Separation and Purification Processes of Thorium and Rare Earth Elements	Bekir Özkan
11:30-11:45	THE RADIOLABELING OF FINGOLIMOD WITH [^{99m} Tc] AND EVALUATION OF BIOLOGICAL EFFECTS WITH IN VITRO METHODS	Emre Uygur		
11:45-12:00	SHORT-TERM NUCLEAR SCIENCES CURRICULUM DEVELOPED FOR SCIENCE TEACHERS WORKING IN SCIENCE AND ART CENTERS	Emre Uygur		

POSTER

		Session Chairs: Dr. Caner TAŞKÖPRÜ, Dr. Özge KOZGUŞ GÜLDÜ, Dr. Berkan ÇETİNKAYA, Prof.Dr. İslam MUSTAFAYEV, Prof.Dr. Saif UDDIN	
ID	Code	Title	Name
2202	NQY1IKB	Microbiological Studies under GMP Requirements at a Radiopharmaceuticals	Büşra Opçin
2203	F1SZC5U	The Quality Control of ²⁰¹ Tl-Thallium Chloride (37 MBq/mL) Produced	Selçuk Gürgür

		at TENMAK Proton Accelerator Facility	
2262	1CXS8FD	SUPERPARAMAGNETIC IRON OXIDE NANOPARTICLES (SPIONS) COATED WITH ¹⁹⁸ Au FOR NANOBRACHYTHERAPY OF HEPATOCELLULAR CARCINOMA (HCC)	Fazilet Zümrüt Biber Muftuler
2272	V8AT41X	Green Synthesis of Magnetite and Evaluation of Their Use in Magnetic Particle Testing	Melise Karatay Kutman
2278	B761MAH	In Vitro Wound Healing Potential Of Hyaluronic Acid Loaded Silver Nanoparticles In Human Gingival Fibroblast	Zarrin Salaji
2460	2MBH0PN	Natural Terrestrial Radiation Levels and Dose Contributions of Cultural and Historical Settlements in East Anatolia	Nurdan Akakçe
2461	CIDP1GE	Radiolabeling of Nanoparticles with Long Lived Radiometals For PET Imaging	Ezgi Gül Bağcı
2472	NOHFPL4	ELECTRICAL CONDUCTIVITY IN GAMMA-IRRADIATED OF TlGa _{1-x} In _x Se ₂ (1-x)S _{2x} SOLID SOLUTION	Famin Salmanov
2475	RIPD6EX	Influence of Radiation on Turkish Lignites	Islam Mustafayev
2497	1K5EG78	Evaluation of X-Ray Shielding Performance of Coated Textile Materials	Fatma Yurt Onaran
2499	BG3JLPX	RECENT DEVELOPMENTS ON THE CYLINDRICAL INERTIAL ELECTROSTATIC CONFINEMENT DEVICE	Betül Yasatekin
2507	YTX2AZI	Portable Gamma Dosimeter with Ceramic Scintillator	Ali Akgöz
2515	DMKERF9	The effect of potassium humate on morphological and physiological	Zohra Muslumova

		parameters in seedlings obtained from gamma irradiated seeds of maize (Zea mays)	
2517	57RHSCO	The possible application of boron-containing polymers for gamma-ray shielding	Bahire Filiz Şenkal
2521	8I15NV0	Investigation of Nuclear Imaging and Photodynamic Therapy Potential of Phthalocyanines in Glioblastoma Cell	Derya ÖZEL
2522	6PGOQJW	Correlation between gamma background and Forbush effect, case study of INRNE-BAS	Nina Nikolova
2709	BHP0MIA	Small and Wide Angle X-ray Scattering Applications on Material Characterization	Buğra Sökmen
2710	24SHVEC	Radiopharmaceuticals for Intelligent Drug Release	Funda Çakmak
2736	GXVPQE1	Seasonal Variations of Po-210 and Pb-210 in Sea Urchins and Patella Species in İzmir Bay	Aysun Uğur Görgün
2808	9L8QROH	Investigation Of the Antimicrobial Activity Of Chlorhexidine Encapsulated Mesoporous Silica Nanoparticles	Emin İlker Medine
2809	DWXF8A5	In Vitro Efficacy of Silymarin Loaded Niosomes in Cancer Treatment	Yaren Hurma
2923	HNQO1WB	IN VITRO EVALUATION OF RADIOLABELED CYCLOPHOSPHAMIDE LOADED MESOPOROUS SILICA NANOPARTICLES	Çiğdem İçhedef
2967	OE6JX2P	VARIATION OF SOIL GAS $^{222}\text{Rn}/^{220}\text{Rn}$ RATIOS ALONG THE FAULT LINE	Gülse Masruoğlu
3109	MJBN9FV	Comparative Investigation of the Radiation Dose Distribution in the Shooting Room During Mammography	Barış Cavlı

		Procedures	
3151	G8I4WCL	Investigation of Thorium Dioxide Obtaining Conditions from Ammonium Thorium Oxalate Complex Solution	Selcan Sengül
3160	VWCZX68	Nanoencapsulation of Lycopene in Niosomes and Determination of Antitumor Activity on Cancer Cells	Yaren Hurma
3162	3JOAFSM	Synthesis and morphological studies of Tc-99m-labeled lupulone-conjugated Fe ₃ O ₄ @TiO ₂ nanocomposite, and in vitro cytotoxicity activity on prostate cancer cell lines	Elif Tutun
3163	UG7LZBW	Determination of Mineralogically Linked Radiological Characteristics of Commercial Natural Structural Stones Used in Turkey	Günseli Yaprak
3164	NXPTV5I	Synthesis, radiolabeling and investigation of bombesin-modified gadolonium nanoparticles as SPECT/MRI agent on prostate cancer cell lines	Elif Tutun
3167	RQ2C5IT	TOMOGRAPHY WITH DIFFERENT NUMBER OF DETECTORS PATIENT DOSE AND CANCER RISK RATIO	Mehmet Erkek
3214	X9RDNM8	INVESTIGATION OF THE EFFECTS OS ITERATIVE RECONSTRUCTION	Murat Dündar