



Ministère de l'Enseignement Supérieur et de la Recherche Scientifique
Université des Sciences et de la Technologie d'Oran USTO- Mohamed Boudiaf
Faculté de Physique



Laboratoire de Microscopie Électronique
et Sciences des Matériaux



Laboratoire d'Analyse et d'Applications
des Rayonnements



2nd Workshop on Materials & Radiation 2ème Workshop sur les matériaux et les rayonnements

Du 01 au 02 décembre 2025

Faculté de Physique, USTO-Mohamed Boudiaf, Oran-Algérie.

Programme du Workshop

Présidents du Workshop : Pr. Mohamed ADNANE
Pr. Anis Samy Amine DIB



<https://drive.google.com/drive/folders/1E7J2fPADzPuyax3ouzpUy5zGcZCEjkou?usp=sharing>

PROGRAMME Lundi : 01-12-2025	
08h00 - 08h30	Inscription
08h30 - 09h00	Cérémonie d'Ouverture Mot du Doyen de la Faculté de Physique » Mot des présidents du Workshop
Session Plénière Chairman : Pr. M. ZERDALI	
09h00 - 09h30	Pr. A.KHIAT , « Development and Characterization of PLA-Based Piezoelectric Composite Films Reinforced with BST and PZT for Energy Harvesting and Sensing Applications », CRTI-Alger
09h30 - 10h00	Pr. Z.CHAOUI , « Step by step Monte Carlo simulations of low energy electrons in Silicon detector 'Katrin experiment for neutrino mass measurements », (U. Sétif 1)
10h00 - 11h00	Pause-Café
Session Orale Chairman : Pr. A. DJELLOUL	
11h00 - 11h15	Dr. F.BECHIRI , « Fabry Perot Infrared pass filter based on porous silicon multilayers », (U.Mostaganem)
11h15 - 11h30	Mr. M.A.BENALI , « ZnO-SnO ₂ Nanocomposite Thin Films: Structural and Optical Tuning for Optoelectronic and Solar Cell Applications », (C.U.El Bayadh)
11h30 - 11h45	Mr. O.BERICHI , « Contribution to the Study of Physical Properties of New Type-Based Material (Lu, Dy, Gd...) by First-Principle Methods », (USTO-MB)
11h45-12h00	Dr. C.GUELLA , « Quantum Light from Atomic Imperfections: Parametric Polaritons in Defect-Engineered MoS ₂ », (USTO-MB).
12h00-12h15	Pr. M.Torrichi , First-Principles Insights into M ₃ C ₂ MXenes (M = Sc, Ti, V, Cr) for Advanced Electronic Applications », (USTO-MB).
12h15-12h30	Dr. I.ZENAIDI , Eco-Friendly Sol-Gel Dip-Coating Deposition of Non-Toxic CuO Thin Films for the Fabrication and Electrical Characterization of Ag/CuO/n-Si/Ag Heterojunction Diodes », (USTO-MB).
12h30 - 13h30	Pause Déjeuner
Session Orale Chairman : Dr. A. SAIM	
13h30 - 13h45	Mr. M. ATI , « Approche 4D en dosimétrie interne : vers une meilleure précision des estimations de dose », (U.Ahmed Ben Bella Oran1)
13h45 - 14h00	Dr. N.BELAMEIRI , « Study of the advanced Scintillator detector for Various Radiation Detection », (USTO-MB)
14h00 - 14h15	Pr. F.BELKHARROUBI , « Enhanced Thermoelectric Efficiency of n-Type Doped CaSbK Half-Heusler Compound », (USTO-MB).
14h15-14h30	Dr. M-Y Boudjella , « Evaluation of a Geant4-Based Monte Carlo Radiative Transfer Model for Surface Solar Irradiance calculation », (USTO-MB)
14h30-15h30	Pause-Café- Session Poster (P01-P18): Topic 1 : Material Physics Chairmen : Dr. S. BENGHABRIT, Dr. M.A. BOUACHRIA et Dr. R.RAHMANI
Session Orale Chairman : Pr. W. ADLI	
15h30 - 15h45	Mr. A. K. BELALEM . Investigation of Structural, optical Properties and Gas sensing behavior of Bismuth Ferrite », (USTO-MB)
15h45 - 16h00	Mr. D.KERROUM . Optoelectronics properties of the semiconductor ZnGeAs ₂ applied to photovoltaic cells », (U. Blida 1)
16h00 - 16h10	Mrs. M. Z.BELMEHDI . A Plasmonic-Based Approach to Enhance Light Absorption in Silicon Using Silver Nanoparticles », (USTO-MB)
16h15-16h30	Mrs. N.NEMICHE , Studies of Solvent Effect on Electronic and Spectroscopic Properties of Quercetin by DFT », (USTO-MB)

PROGRAMME	
MARDI : 02-12-2025	
Session Plénière	
Chairman : Pr. A.S.A. DIB	
08h30 - 09h00	Pr. B.BENRABAH, « Les Différentes Techniques de Dépôt Utilisées pour l'Élaboration des Films Minces d'Oxydes Spinelles », (U. de Tiaret).
09h00 - 09h30	Pr. M.ADNANE, «Quinze ans de recherche sur les couches minces des matériaux pour la réalisation des cellules solaires», (USTO-MB).
09h30 - 10h30	Pause-Café- Session Poster (P19-P28): Topic 2 : Radiation Chairmen : Dr. F. GHALEB, Pr. F. BELKHARROUBI
	Session Orale Chairman : Pr. S .HIADSI
10h30 - 10h45	Dr. H.SEDIKI, «Ab Initio calculations of structural, electronic and magnetic properties of SrNbO ₃ perovskite», (USTO-MB).
10h45 - 11h00	Dr. N.HOURI, «Effect of TiO ₂ Particle Size on the Performance of Dye-Sensitized Solar Cells », (USTO-MB).
11h00 - 11h15	Dr. I.MEDJADJI, «Magneto-Structural Evolution and Successive Metamagnetic Transitions in Ru ₂ VGe _{1-x} Si _x Full-Heusler Alloys », (U.Sidi Bel Abbés).
11h15 - 11h30	Mrs. A. LAHOUEL, «Simulation and Optimization of High- Efficiency Pt/CIS/CdS/TiO ₂ /FTO Solar Cells Using SCAPS-1D », (USTO-MB).
11h30-11h45	Mrs. Y.LARABI, «AB-INITIO STUDY OF THE ELECTRONIC, MAGNETIC, AND PHONON PROPERTIES OF LaFeO ₃ PEROVSKITE », (USTO-MB).
12h00 - 12h30	Clôture du Workshop Remise des attestations de participation
12h30 - 13h30	Pause Déjeuner

N.B. : Les communications de dérouleront à la salle de conférence au 4^{ème} étage de la faculté de physique de l'université USTO-Mohamed Boudiaf.

Session Poster

Référence	Nom & prénom	Titre de la communication	Institution	Thème
P-01	Abdeljebar BENEDDOUCHE	Alliages Ir-Os : entre stabilité atomique et performances mécaniques remarquables	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-02	Amel MEKKI	Physicochemical synthesis and characterization of a porous material	Higher School of Biological Sciences of Oran (ESSBO)	Matériaux
P-03	Zohra DRAOUA	Structural and Physical Properties of a Clay-Based Bimetallic Composite for Advanced Functional Materials	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-04	Fatiha BOUKRA DJELLAL SAÏAH	The Removal of anionic organic dye from Aqueous Solutions by hierarchical porous ZrO ₂ and mesoporous nickel-iron mixed oxides: Adsorptive efficiency	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-05	Ismail GHOMRI	BaFeO ₃ theoretical study of structural and magneto-electronic properties with GGA approximation	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-06	Hakima BOUBLENZA	First-Principles Study of Structural, Electronic, and Pressure-Induced Superconducting Properties of Scandium Nitride	University of Oran 1 Ahmed Ben Bella	Matériaux
P-07	Hend Cherifa AROUSSI	Effect of In content on ternary In _x Ga _{1-x} N alloys performance: Hybrid density functional theory	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-08	Imene KADI ALLAH	Improvement of the performance of microbial fuel cells by the mixed oxide pyrochlore-type catalyst to produce electrical energy	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-09	Lala AOUINTI	Préparation et caractérisation des membranes hybrides à base de MIL 53 pour le dessalement de l'eau de mer	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-10	Mohamed MELOUKI	Correlation Between Fluorine Doping, Structural Modification and Enhanced Conductivity in SnO ₂ Thin Films Deposited by Spray Pyrolysis	Higher normal school of Saida	Matériaux

P-11	Nawal BELMILOUD	First-Principle calculations of structural and electronic thermodynamic properties of metal magnetic TaIrGa	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-12	Rabia RAHMANI	Structural, mechanical, electronic and thermodynamic properties of a barium-based perovskite: A first-principles study	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-13	Abderrahmane ROUANE	Synthesis of a hydrogel polymer from acid polyethylene dimethyl acrylate and its structural investigation using infrared spectroscopy and X-ray diffraction	University of Blida	Matériaux
P-14	Mouna BAADJI	Synthesis and characterization of Bismuth Ferrite Based Thin Films	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-15	Asmaa BAHLOULI	Ab initio study of phase stability and topological properties of rare earth based half Heusler compounds RePdX (Re=rare earth element and X=Bi,Sb)	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-16	Mohamed Amine BOUACHRIA	Synthesis and characterization of polyvinyl alcohol (PVA) composite doped with copper oxide (CuO)	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-17	Zahira BOUKHEMIKHEM	Effect of the synthesis of the Spinel NiFe ₂ O ₄ on the physical properties	University of Sciences and Technology of Houari Boumedien USTHB	Matériaux
P-18	Sihem BENGHABRIT	Comparative Study of Experimental and Simulated Approaches to Evaluate the Influence of Sulfide-Based Layers on Solar Cell Efficiency	University of Sciences and Technology of Oran Mohamed Boudiaf	Matériaux
P-19	Karima KHALLAFI	Real time monitoring of NO ₂ concentrations in the city of Oran	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-20	M.R.RAMDANI	Next-Generation Microfluidic Reactor for Clean Water production	CRAPC-Tipaza	Radiation
P-21	Zahra CHAARAOUI	Comparaison de l'absorption expérimentale de l'eau et du sang avec l'absorption calculée par simulation Monte Carlo	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation

P-22	Aicha DJERABA	Characterization of isotopes used in PET	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-23	Amina HADJAL	Monte Carlo Simulation of Gamma Attenuation Properties in Tungsten-Titanium Alloys	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-24	Billel Abdelaziz BOUCHIKHI	L'intervention de l'intelligence artificielle dans le domaine médical	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-25	Radia MALKI	Ab initio investigation of the structural, electronic and optical properties of ternary alloy based on selenium	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-26	Afafe MAZIZ	Size-dependent Auger electron emission from gold nanoparticles under X-ray irradiation: analysis of testEm5 results	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-27	Nora GHEDIR	Cloud sharing concentrations measures of Carbon monoxide in the city of Oran	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation
P-28	Houria YAGOUB	Extraction des indicateurs spectraux pour la caractérisation de l'état physio hydrique de la végétation au nord d'Afrique	University of Sciences and Technology of Oran Mohamed Boudiaf	Radiation