

## Conférence Franco-Maghrébine TRAMP-2023

### NANOMATÉRIAUX: MICROSTRUCTURE ET PROPRIÉTÉS

Du 25 au 27 octobre 2023

A la salle des conférences du département  
Génie mécanique et structures de l'ENSAM-Meknès



Session des Conférences: 20 min + 10 min de questions  
Session des communications orales : 10 min + 05 min de questions

## Programme de la conférence TRAMP-2023

<b>Mercredi 25 Octobre 2023</b>		
<b>Session des conférences : Nanomatériaux &amp; Modélisation</b>		<b>Chair : Ahmed Charai</b>
<b>Inscription et ouverture (9h 00 – 10h 00)</b>		
10h 00	<a href="#">Abdelilah Benyoussef</a>	Nanomaterials for green hydrogen production: Modeling and simulation
10h 30	<a href="#">Franck Dahlem</a>	Cellulose Nanopaper, applications to power generator
11h 00	<a href="#">Frederic Sanchette</a>	Elaboration et caractérisation de films d'alliages réfractaires à haute entropie obtenus par pulvérisation cathodique magnétron.
<b>Pause café (11h 30 - 12h 00)</b>		
<b>Session des communications orales : Nanomatériaux &amp; Modélisation</b>		<b>Chair : Frederic Sanchette</b>
12h 00	<a href="#">Smaïl Amraoui</a>	Experimental and theoretical studies of synthesized nickel nitride material Ni <sub>3</sub> N
12h 15	<a href="#">Safae Benyoussef</a>	Electronic, structural, optical and thermoelectric properties of Cu <sub>4</sub> SnS <sub>4</sub> system through first-principles calculations
12h 30	<a href="#">Andrea Newman</a>	Influence of the Si surface preparation on CoSi <sub>2</sub> formation and agglomeration
12h 45	<a href="#">Hamza Kerrai</a>	Ab initio and Monte Carlo studies of the double perovskite Sr <sub>2</sub> CrMoO <sub>6</sub> for spintronic applications.
13h 00	<a href="#">Lhoussain Ouzaroual</a>	Propriétés magnétiques d'une structure à spins mixtes à géométrie sphérique : étude par la méthode Monte-Carlo
<b>Déjeuner (13h 15 – 14h 30)</b>		
<b>Session des conférences: Microstructures &amp; Caractérisation</b>		<b>Chair : Franck Dahlem</b>
14h 30	<a href="#">Hosni Idrissi</a>	The extreme mechanics of nanostructured materials
15h 00	<a href="#">Najeh Thabet Milki</a>	On bismuth ferrite nanostructures: from fundamental to applications
15h 30	<a href="#">Sami Boufi</a>	Nanoparticles from Hierarchical biobased materials: Morphology, Production and some applications
<b>Pause café (16h 00 – 16h 30)</b>		
<b>Session des communications orales : Microstructures &amp; Caractérisation</b>		<b>Chair : Hosni Idrissi</b>
16h 30	<a href="#">H. Mrezguia</a>	Synthesis and electronic properties of silicene grown on B:Si(111)-(√3x√3)R30° and Ag/Si(111)-(√3x√3)R30° by heteroepitaxy
16h 45	<a href="#">Laila Akram</a>	Investigating the Microstructural Changes in Concrete Exposed to Elevated Temperatures: Insights from IR-ATR, XRD, and TGA/DTA
17h 00	<a href="#">Abderrahim Barhouni</a>	Numerical investigation of the effective Young's modulus of a twisting metamaterial architected with diamond-shaped base cells.
17h 15	<a href="#">Mohamed Draoui</a>	Examination of the Impact of Eggshell Constituents on the Microstructure and Mechanical Characteristics of Al-Si Alloys: A Literature Review and Analysis
17h 30	<a href="#">Jérémy Landes</a>	Characterization of microstructure and precipitation in a welded low-alloy steel in the as-welded state and after post weld heat treatment
17h 45	<a href="#">Nouhaila ElAlouani</a>	Modélisation numérique de la propagation des ondes électromagnétiques dans le béton
18h 00	<a href="#">Zriki Safae</a>	Effect of liquid metal treatment on the microstructure of AlSi9 alloy
18h 15	<a href="#">Reda Chattahy</a>	Synthesis, characterization and evaluation of a coal fly ash-based ceramic as a high temperature TES material for use in packed-bed thermal storage system

## Jeudi 26 Octobre 2023

<b>Session des conférences: Matériaux &amp; Energie</b>			<b>Chair : Mohamed Gouné</b>
09h 00	Ismael Saadouné	Meeting the future challenges of Lithium-ion Batteries through the development of active electrode materials	
09h 30	Henrich Frielinghaus	Neutron Scattering Sheds Light on Lithium Battery Research	
10h 00	Pascal Briois	Elaboration et caractérisation d'une pile à combustible à oxyde solide obtenue par des technologies couches minces	
10h 30	Abdelilah LAHMAR	Lead-free ferroelectric materials for Energy storage capacitors	
<b>Pause café (11h 00 - 11h 30)</b>			
<b>Session des communications orales : Matériaux &amp; Energie</b>			<b>Chair : Henrich Frielinghaus</b>
11h 30	LeilaOuachou	Effect of new alkali transition metal-oxide addition on physical, structural, and electrical properties of borophosphate glasses	
11h 45	Youness Hadouch	Multiferroic CoFe <sub>2</sub> O <sub>4</sub> -Ba <sub>0.95</sub> C <sub>0.05</sub> Ti <sub>0.89</sub> Sn <sub>0.11</sub> O <sub>3</sub> Core-Shell Nanofibers for Magnetic Field Sensor Applications	
12h 00	AfaakLakouader	Optimizing Performance: The Role of the Number of Layers in Electrical Storage Properties of BCZT Thin Films Heterostructures	
12h 15	Imane Chaiboub	Sodium Phosphate Glass Ceramic Solid Electrolyte: A Promising Material for Advanced Sodium-Based Energy Storage Systems	
12h 30	Saida Taoussi	Advanced Li-Ion Conductive phosphate Glass-Ceramic Solid Electrolyte for High-Performance Energy Storage Devices: Characterization and Properties	
12h 45	Abdelmalik Brik	Bismuth Oxyiodide (Bi <sub>2</sub> O <sub>3</sub> I <sub>2</sub> ) Nanostructure Embedded in Chitosan as a Heterogeneous, Reusable and Highly efficient Photocatalyst for Water Treatment	
<b>Déjeuner (13h00- 14h 30)</b>			
<b>Session des conférences: Structures &amp; Microstructures</b>			<b>Chair : Pascal Briois</b>
14h 30	Alain Portavoce	Atomistic simulations of phase separation in Ge-rich Ge-Sb-Te PCRAMs	
15h 00	Olha Nakonechna	Nanoscale investigation of austenite/ferrite transformation interfaces in Fe-Mn-C steel	
15h 30	Sylvie Bordere	Modelling of diffusion-controlled phase transformations with mechano-chemical coupling: examples of simulations in materials processes.	
16h 00	Frédéric Danoix	Multiscale investigation of iron meteorites: from physical metallurgy to solar system history	
<b>Pause café (16h 30 – 17h 00)</b>			
<b>Session des communications orales : Structures &amp; Microstructures</b>			<b>Chair : Sylvie Bordere</b>
17h 00	Carine Perrin	First intermetallic phase formation kinetics in the Ni/GaAs system	
17h 15	Nouhaila Oulida	A Mineralogical Analysis of 14th-Century Chellah Mosque Mortars: Insights from XRD and SEM-EDS	
17h 30	Mohamed El Omari	Raman, ATR-FTIR and XRF Analyzes of natural mineral stones from Mibladen, Midelt region (Morocco)	
17h 45	Bouchra Asbani	On chip MnO <sub>2</sub> -based 3D micro-supercapacitors with ultra-high areal energy density	
18h 00	Zouhir Mansouri	Approaches and Developments in Stability of Two-Dimensional Black Phosphorus Nanomaterials Towards Next-Generation Energy Storage Device Applications	
20h00	<b>Soirée GALA</b>		

## Vendredi 27 Octobre 2023

<b>Session des conférences: Nanomatériaux &amp; Propriétés</b>			<b>Chair : Franck Dahlem</b>
09h 00	M'barek Amjoud	Surface functionalization: a powerful tool for smart materials development	
09h 30	Mohamed SAADAoui	Fabrication of Sn-graphene core-shell nanocomposite on plastic and its potential use in energy harvesting and storage applications	
10h 00	Pierre Stocker	X-ray scattering studies of FeSi <sub>2</sub> films epitaxially grown on Si(111)	
<b>Pause café (10h 30 - 11h 00)</b>			
<b>Session des communications orales : Nanomatériaux &amp; Propriétés</b>			<b>Chair : Pierre Stocker</b>
11h 00	Hajar Zaitouni	Structural evolution, energy storage and electrocaloric effect properties of Sn doped Ba <sub>0.9</sub> Sr <sub>0.1</sub> TiO <sub>3</sub> eco-friendly ceramics	
11h 15	Souad Ait Saghir	Exploring the potential of lead-free Ba <sub>0.8</sub> Ca <sub>0.2</sub> TiO <sub>3</sub> ceramic synthesized by solid state reaction method for Electro caloric application	
11h 30	H. Es-soufi	Exploring the Crystalline Phase in the NaNbO <sub>3</sub> -BaNb <sub>2</sub> O <sub>6</sub> -MoO <sub>3</sub> System: A Study of Crystallography, Structural Features, and Electrical Characteristics	
11h 45	Ahmed Ouaha	Substitution-induced enhancement of dielectric and optical properties of BiFeO <sub>3</sub> multifunctional ceramics	
12h 00 à 13h00	<b>Session poster</b>		
<b>Déjeuner (13h 00 – 14h 30)</b>			
<b>Session des communications orales : Nanomatériaux &amp; Propriétés</b>			<b>Chair : Diana Kaynts</b>
14h 30	Jamal Belhadi	High Energy Storage Performance in Ferroic Thin-Film Capacitors for Next-Generation Electronic Devices: Effects of Built-In Potential, Defect Dipoles, and Strain Gradient	
14h 45	Siham Hassak	Structuring of CuSe-Te chalcogenides under irradiation by electron beam	
15h 00	Zineb Moujoud	Clay Brick Waste as Partial Replacement of Geopolymer Binders	
15h 15	Abderrazzak Hamadallah	Hot tearing evaluation in metallic and sand molds of AlCu <sub>5</sub> MgTi alloy	
15h 30	Soufiane Elhadfi	Structural and Optoelectronic Properties of Linear Chains/Carbon Nanotubes Heterostructures for Organic Solar Cells	
15h 45	Rached Ben Hassen	Unveil the mysteries of SrSnO <sub>3</sub> : a groundbreaking perovskite that paves the way for a promising future as a lead-free material for innovative solar cells and solid oxide fuel cells SOFCs	
16h 00	Ilyas Chabri	Optimizing Formamidinium Tin-Based Perovskite Solar Cells: SCAPS Device Simulation	
16h 15	Zakariya Arbaoui	Vibrational modes in black phosphorene	
16h 30	Moussa kibbou	Designing new halide double perovskite materials Rb <sub>2</sub> AgGaX <sub>6</sub> (X: Br, Cl) with direct band gaps and high power conversion efficiency	
16h 45	Aafrae Benajiba	Exploring the potential of recycling marine bio-waste to create natural hydroxyapatite for biomedical applications	
17h00	Abdelaziz Alioui	Theoretical Study of the Effect of $\pi$ -Bridge on Optical and Electronic Properties of Triazatruxene-Based Sensitizers for DSSCs.	
17h 15	Titchou Fatima Ezzahra	Formation of Nanomaterials in Sludge Generated by Electrocoagulation: Characterization and Implications	
<b>17h 30: Clôture</b>			