

*First National Conference on **M**aterials **S**ciences:
From **R**esearch to **T**eaching¹*

MSRT'2020

Oran (Algeria)

23-24 February 2021



TIMETABLE

Overview

The First National Conference on Materials Sciences: From Research to Teaching “MSRT2020” will be organized by the exact sciences department, Higher School of Education, Oran on 23-24th, February 2021. This conference has two shutters: Research in materials sciences and the exploitation of research results to enhance their teaching.

The “MSRT2020” initiative will provide a common platform for the researchers from different disciplines (physics, chemistry, mathematics, computing science,...) to share their recent works covering interdisciplinary topics, which show the applicability of these disciplines to solve problems in materials sciences. Therefore, the employment of computational methods and experimental techniques in the materials sciences field allows discovering new materials, investigating and developing the existing one. The advance in materials sciences leads and requires the evolution of teaching methods. Updating the teaching program and adopting of efficient and effective practice in training will provide a better understanding of basic concepts in materials sciences. So, this scientific event aims to bring together researchers in materials sciences and didactics to discuss the exploitation of research results to improve the teaching / learning practices in these sciences at higher education.

Topics:

- Materials elaboration and characterization.
- Nanotechnology and Nano biotechnology.
- Modeling, analysis and computations in materials sciences.
- Impact pedagogies in materials sciences teaching.
- Innovative strategies for materials sciences education.
- Physics and chemistry didactics.
- Mathematics didactics.
- Computing education.

Tuesday, February 23, 2021 « Morning »

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| 08h30 | Welcome and Registration |
| 09h00 | Opening ceremony |
| 09h00 | Pr. Rahiel Djelloul - Director of ENS Oran - |
| 09h30 | Pr. Hamou Mohamed - Rector of Univ.Oran |
| | Pr. Kaid Fatiha - Assistant - Director of ENS Oran – |
| | Dr. Larbi Fadila - Conference Chairwoman - |
| 09h30 | Plenary conference |
| | Pr. Sib Jamal Dine |
| | <i>“Le silicium amorphe hydrogéné du photovoltaïque au biocapteur”</i> |
| 10h15 | - ESG2E Oran - |
| | Chair: Pr. Kail Fatiha |
| | - ISTA Oran - |
| 10h15 | Coffee break |
| 10h45 | Plenary conference |
| | Pr. Baghdad Rachid |
| 10h45 | « <i>Bismuth doping effect on structural and optical properties of nanocrystalline SnO₂ thin films grown by ultrasonic spray pyrolysis method</i> |
| 11h00 | <i>“From the idea to the application”</i> » |
| | - Univ. Tiaret - |
| | Chair: Pr. Kail Fatiha |
| | - ISTA Oran – |
| 11h30 | Plenary conference |
| | Pr. Oldache Mustapha |
| 12h00 | « <i>Vers un enseignement des sciences basé sur l'épistémologie et l'histoire des sciences</i> » |
| | - ENS Kouba - |

Chair: Pr. Kaïd Fatiha
- ENS Oran -

12h00

Lunch

13h00

Tuesday, February 23, 2021 « Afternoon »

Workshop A

| TIME | SPEAKER | TITLE | CHAIR |
|-------|---|---|-----------------------|
| 13h00 | (03) Kaouka Alae ddine - ENS Laghouat - | Performance of titanium alloy Ti-6Al-4V-0.5Nb at high temperatures and its mechanical characterization | Pr. Baghdad Rachid |
| 13h20 | (58) Zedmi Sahraoui Fouzia - Univ.Oran 1- | Effect of the deposition pressure and substrate temperature on the structural and optical properties of radiofrequency magnetron sputtered hydrogenated silicon films | |
| 13h40 | (56) Boussaada SalahEddine - Univ. Mascara - | Study of the optical and morphological electrical properties of MoO ₃ films for adjustment of the anode / buffer layer interface (ABL) in solar cells | |
| 14h00 | (61) FekkarNemmiche Nadia - ENS Mostaganem - | Physicochemical characterization of hydrophobic nanoporous silica materials | Pr. El-Miloudi Khaled |
| 14h20 | (15) Sened Nassiba - Univ. Chlef - | Thermal properties of Nanocomposites based on polycaprolactone (PCL) and Zinc Oxide (ZnO) | |
| 14h40 | (14) Dehraoui Fatima - AinTemouchent Univ. Center - | Synthesis, characterization, and adsorption properties of Pani | |
| 15h00 | (01) Dehar Mokhtaria - ENS Oran - | Synthèse, caractérisation et hydrolyse de polymères gels supports de principes actifs | |

Workshop B

| TIME | SPEAKER | TITLE | CHAIR |
|-----------------|---|---|-------------------------|
| 13h00 13h20 | (65) Benmansour Amel - Univ Tlemcen - | <u>Surface critical behavior of thin Ashkin Teller films at the 'special point'</u> | Pr. Belfedal Abdelkader |
| 13h20 13h40 | (73) Boubabouri Benaissa - ENP . Oran - | <u>Analyse numérique d'un écoulement compressible autour d'un profil aérodynamique</u> | |
| 13h40 14h00 | (43) Belabbas Mawloud - Univ. Saida - | CHSH undesirable Auger effect and Optoelectronic properties of the infrared materials TlxB1-xN for photocatalyst applications: A DFT Study | |
| 14h00 14h 20 | (60) Chenouga Ismahane - Univ. El Taref - | <u>Rietveld Simulation as a Method of Further Developing a structural and microstructural properties of the mechanical alloyed Fe-Cu-Sn Nanomaterials</u> | |
| 14h20 14h40 | (28) Kettache Meriem - Ain Temouchent Univ. Center - | <u>New Fe-Cr Based Alloy, from Elaboration to Rietveld Simulation of Structural and Microstructural Properties</u> | Dr. Iles Nadia |
| 14h40 15h00 | (46) Demmouche Kamel - Ain Temouchent Univ. Center - | <u>Anisotropic and plane-selective study of carbon interstitial in SiC: a theoretical study</u> | |
| 15h00 15h20 | (45) Belkofski Reguia - Univ. Bejaia – | <u>Effet des vibrations du point zéro sur les transitions de phases dans le CaCO3 sous pression</u> | |
| 15h20 15h40 | (08) Hamada Khelifa - Univ. Saida – | <u>The use of ferromagnetic half-metals in spintronics</u> | |
| 15h40 16h00 | Coffee break | | |

1st Posters Session

| TIME | PARTICIPANT \ TITLE | CHAIR |
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| 16h00 | (02) Lellouche Saliha - Univ. Chlef - <u>Characterization of the microstructure of a Al-Cu thin film by differential scanning calorimetry (DSC)</u> | Pr. Sib Jamal Dine Dr. Heireche Mohamed |
| | (06) Lakel Abdelghani - Univ. Biskra - <u>Preparation and characterization of ZnO thin films doped with aluminum and Iron by ultrasonic spray</u> | |
| | (15) Lakel Abdelghani - Univ. Biskra - <u>Influence of expanded graphite on physical properties of fluoroplastics</u> | |
| | (10) Ziani Faten - Univ. Tebessa - <u>Study of Doping and Co-doping with Al and Sb TinOxide-based Thin-Film</u> | |
| | (34) Bendjeroudi b Chafia - Univ. Tebessa - <u>The effect of the substrate type on the physical properties of the thin layer Fe / Ag</u> | |
| 17h 00 | (48) Djoui Siham - Univ. Oran 1 - <u>Analysis of Silicon Nanowires Grown by PECVD with the VLS Mechanism</u> | |
| | (67) Ben hamdoune Sabah - Univ. Laghouat - <u>Ab initio investigation of the structural and optoelectronic properties of the hexagonal gallium iodate Ga(IO3)3</u> | Dr. Bourahla Saida Dr. Larbi Fadila |
| | (42) Nacef Ahmed - Univ. Tiaret - <u>Structural, Electronic and Optical properties of AgBO2 delafossite an ab-initio study</u> | |
| | (66) Saadaoui Fatiha - Univ. Saida - <u>Structural, elastic, and electronic properties of InNNi3 and InCNi3 antiperovskites</u> | |
| | (35) Ouadhah Ismail - Univ. Sidi Belabes - <u>Study of the structural, mechanical and thermodynamic properties of the new MAX phase compound Ti3AlC2</u> | |
| | (26) Benazzouzi Aicha - Relizane Univ. Center - - First principles study of structural and electronic, properties of AgBr | |
| | (23) Rached Azzouz Ahmed - Univ. Chlef - <u>First-principle study of magnetic, mechanical and thermodynamic properties of MAX Phase Fe2AlC</u> | Pr. Lidjici Hamza Dr. Berrahal Mokhtar |
| | (27) Beloufa Nabil - ENP Oran - <u>Contribution à l'étude des propriétés des alliages ScGaN.</u> | |
| | (20) Kherfia Belabed - Univ. Mostaghanem - theoretical and spectral study of toxic compounds | |
| | (25) Hamli Meryem - AinTemoouchent Univ. Center - <u>Investigation théorique de nouveaux composés demi-Heusler MRhSb(M = Nb et Ta)</u> | |
| | (38) Bentahar Yacine - Univ. Saida - Modélisation et simulation des propriétés thermodynamique des alliages Full-Heusler de type Rh2YIn (Y=Sm, Gd, Tb) pour la conversion Magnéto calorique | |

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| | (11) Khelfoum Abdel Hamid - Univ. Blida 1 - | Studies of compression modules B (bulk modulus) of graphene and similar materials | |
| 17h00 | Coffee Break | | |
| 17h15 | <i>Closing of the conference first day</i> | | |

Wednesday, February 24, 2021 « Morning »

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| 08h30 | <p>Plenary conference</p> <p>Pr. Guendouz Naima</p> <p>« <i>L'enseignement des Sciences et exigences de l'enseignant du 21^{ème} siècle</i> »</p> |
| 09h15 | <p>- ENS Oran -</p> <p>Chair: Dr. Labeled Zohra</p> |
| 09h15 | <p>Plenary conference</p> <p>Pr. Belkredim Fatima Zohra</p> <p>« <i>Raisonnement et Intelligence artificielle</i> »</p> |
| 10h00 | <p>- Univ. Chlef -</p> <p>Chair: Dr. Boumedien Malika</p> |
| 10h00 | <p>Coffee break</p> |
| 10h30 | |

Workshop C

| TIME | SPEAKER | TITLE | CHAIR |
|-------|---|---|-----------------------------|
| 10h30 | <p>(49) Bishop Elizabeth - Univ. Oran 2 -</p> | <p>History of Materials Sciences: From Research to Teaching</p> | <p>Dr. Labeled Zohra</p> |
| 10h50 | <p>(31) Haouatis Djamel - Univ. Médéa -</p> | <p><u>Place centrale du modèle et de la modélisation dans l'enseignement de la Physique</u></p> | <p>Dr. Boumedien Malika</p> |
| 11h10 | <p>(72) Kies Karima - UST Oran -</p> | <p><u>Les pratiques modernes d'évaluation : Etude de cas</u></p> | |
| 11h30 | <p>(74) Boumedien Malika - UST HB Algiers -</p> | <p>Experimental Mathematics</p> | <p>Dr. Dekhici Latifa</p> |
| 11h50 | <p>(32) Abdesselem</p> | <p>Difficultés d'apprentissage des probabilités</p> | |

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| 12h10 | Nawel - Univ. Laghouat - | en Algérie (Laghouat). | |
| 12h10 12h30 | (75) Khansous Ghania - ENS Oran - | Simulation tool SUMO for Vehicular Ad hoc Network | |
| 12h30 | Lunch | | |
| 13h00 | | | |

Wednesday, February 24, 2021 « Afternoon »

| <i>2nd Posters Session</i> | | | |
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| TIME | PARTICIPANT \ TITLE | | CHAIR |
| 13h00 | (12) Bensafi Toufik - Univ. Mascara - | Synthesis, Characterization of New Substituted 4-Thiazolidinone for photovoltaic applications. | Dr. Harrats Charef Pr. El-Miloudi Khaled |
| | (14) Tabti Hadja Alia - Univ. Saida - | Caractérisation des propriétés structurales et texturales d'une argile anionique | |
| | (50) Saad Fatima - Univ. Oran 1 - | Elaboration and characterization of a petrochemical material by different spectroscopic techniques | |
| 14h 10 | (52) Chaouch Nawel - Univ. Chlef - | Synthesis, characterization of copper and cadmium complex | Dr. Bourahla Saida Dr. Iles Nadia |
| | (54) Dib Nihel - Univ. Oran 1 - | Application à la rétention du plomb(II) par les hydrogels de poly(AMA-co-NVP-re-BAA) | |
| | (55) Hadj kaddour Nadia - Univ. Oran 1 - | Utilisation d'une méthode optique la spectroscopie UV-Visible pour déterminer le seuil de floculation d'une Macromolécule | |
| | (59) Abdelmalek Fatiha - Univ. Tlemcen - | Etude des propriétés physiques et rhéologiques des composites biodégradables de poly butylène succinate PBS/ Fibre d'Alfa | |
| | (62) Khemissi Aicha - Univ. Chlef - | Modified transfer matrix method for electronic transmission properties of armchair Carbone nanotubes | |
| | (63) Bechokra Lina Linda - USFHB Algiers - | Monte carlo simulation study of functionalized coiled carbon nanotubes as emerging nanovectors for the delivery of quercetin drug. | |
| | (24) Baba Ahmed Nassim - Univ. Tlemcen - | Modélisation des propriétés optiques et électriques des cellules solaires. | |

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| | (39) Rahal Wassila Leila - Univ. Mostaganem - | Etude comparative des performances des cellules solaires à hétérojonctions de silicium | |
| | (41) Rahal Wassila Leila - Univ. Mostaganem - | Simulation d'une cellule solaire CZT S à haut rendement avec réduction maximale du Sulfure de Cadmium utilisé comme couche tampon | |
| | (44) Tekouk Mokhtar - Univ. Mostaganem - | Optimisation par simulation d'une cellule solaire à couches minces ZnO/CdS/CZT S/MoS ₂ | |
| | (40) Rached Djaaffar - UST Oran - | Etude de l'effet de la densité de défauts du silicium cristallin sur la caractéristique courant-tension des cellules HIT de type n. | |
| 14h10 | Coffee break | | |
| 14h30 | | | |
| 14h30 | <i>Closing ceremony</i> Symposium recommendations | | |
| 15h30 | | | |

Organizing committee

Dr. M. Heireche , Dr. M. Berrahal, Dr. K. Yahiaoui , Mrs. S. Makouf, Dr. F.Z. Benkaddour , Mr S. Hebri, Dr. G. Khensous , Dr K. Labed, Dr. M. Dahar, Dr F.Z. Fadhli

Scientific committee

Pr. F. Kaid (ENS Oran), Pr. N. Benamar (ENS Oran), Dr. K. Yahiaoui (ENS Oran), Dr. Z. Labed (ENS Oran), Pr. H.Y. Madani (ENPO. Oran), Pr. F.Kail (ISTA. Oran), Dr. N. Iles (ISTA. Oran), Dr. L. Dekhici (USTMB. Oran), Pr. M. Oldache (ENS Kouba), Pr. A. Belfedal (Univ.Mascara), Pr. R. Baghdad (Univ.Tiaret), Pr. H. Lidjici (Univ. Laghouat), Pr. K. El Miloudi (Univ. Chlef), Dr. S. Bourahla (Univ. Chlef), Pr F.Z. Belkredim (Univ. Chlef), Dr. M. Boumedien (USTHB Algiers), Dr. C. Harrats (Univ. Mostaganem).