

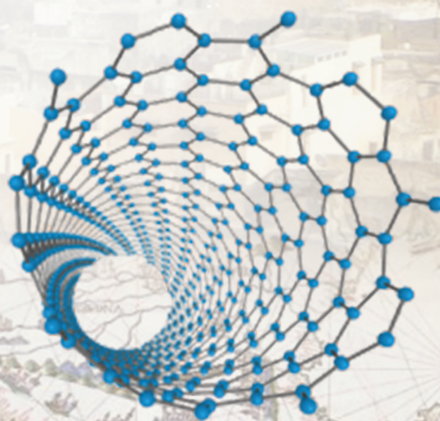
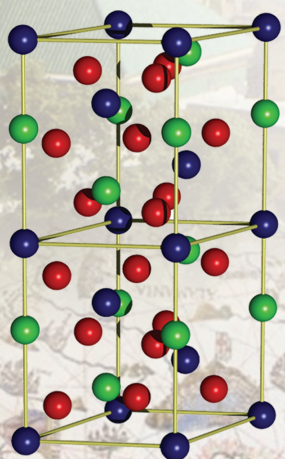


جامعة سيدي محمد بن عبد الله
+080.144 0348 676608 01 80871100
UNIVERSITÉ SIDI MOHAMED BEN ABDELLAH



LABORATOIRE SIGNAUX SYSTÈMES ET COMPOSANTS

Mediterranean Meeting on Materials and Applications MMMA 2018



Faculty of Sciences and Technologies
(FST) FEZ
October 18-19, 2018

[HTTP://WWW.FSTFES.FST-USMBA.AC.MA/CONFERENCES/M3A2018/](http://www.fstfes.fst-usmba.ac.ma/conferences/M3A2018/)

RESPONSABLES DE LA MANIFESTATION :

Farid Abdi, FST, Fès, USMBA, Maroc :
farid.abdi@usmba.ac.ma

3MA Program

	Thursday 18 october 2018	
08h30-09h00	Registration	
09h00-09h30	Opening ceremony and Welcome	
09h30-10h30	<i>Chairman: Pr M.LAHBABI</i> <i>Keynote speech 1 : " Ibn Sahl et la découverte de la loi de la réfraction: une contribution majeure dans l'histoire de l'optique "</i> Pr. Pierre Coulet , Nice University -France	
10h30-11h00	Coffee Break	
11h00-12h40	Oral session 1 : Synthesis & structure 1	Oral session 2 : Hybrid Materials 1
12h40-14h00	Lunch	
14h30-16h10	Oral session 3 : Physical properties of ceramics	Oral session 4 : Organic and Phosphates
16h10-16h30	Break coffee & Posters	
16h30-18h30	Oral session 5 : Specific Materials	Oral session 6 : Theories, Methods and models

	Friday 19 october 2018	
09h00-10h00	<i>Chairman: Pr N.EL AMRANI EL IDRISI</i> Keynote speech 2 : " Properties of some two-dimensional Materials by Density Functional Theory: application for energy conversion and storage " Pr. Abdelilah Benyoussef , Professeur à l'Université Mohamed V - Rabat	
10h00-10h30	Coffee break & Posters	
10h30-12h30	Oral session 7 : Synthesis & structure 2	Oral session 8 : Hybrid Materials 2
12h30-13h00	Closure Ceremony	

IMPORTANT AUTHOR INFORMATION

KEYNOTE presentations: 40 minutes presentation + 5 minutes discussion

Oral presentations: 15 minutes presentation + 5 minutes discussion. Have your presentation file on USB stick with you

Poster presentations: size A0, portrait orientation.

You are kindly asked to stay near your presentations for discussions or dialogue.

You are kindly asked to remove your poster after the meeting ends. Posters left on the boards will be disposed of and will not be stored

SESSION 1 : SALLE DES CONFERENCES Synthesis and struture 1 Chairman: Pr E.LOTFI	
11H00-11H20	ID23 : Influence du Strontium sur les propriétés structurales et diélectriques de PbTiO ₃ élaborés par voie solide et hydrothermale El Houcine Lahrar, El Houssine El Ghadraoui, Ahmed Harrach, Mohammed Zouhairi and Tajeddine Lamcharfi
11H20-11H40	ID34 : Hydrothermal synthesis, structural and electrical properties of lead-free (1-x) (Na _{0.5} Bi _{0.5})TiO ₃ -x(K _{0.5} Bi _{0.5})TiO ₃ ceramics Mohammed Mesrar, Taj-Dine Lamcharfi, Nor-Said Echatoui, Farid Abdi and Mohammed Zouhairi
11H40-12H00	ID28 : Temperature-Pressure phase diagrams and dielectric properties of ferroelectric KNbO ₃ Mustapha Tarnaoui, Malika Zaim, Ahmed Zaim and Mohammed Kerouad
12H00-12H20	ID66 : Structural, spectroscopic studies and magnetic properties of new diphosphates: CO ₅₂ +Fe ₂₃ +(P ₂ O ₇) ₄ and Zn ₂ +5Fe ₃ +2(P ₂ O ₇) ₄ coating/ electrode contact zone Hafsae Lamsaf, Benilde Costa, Ismail Maarouf, Elhoussine Elghadraoui, Ijjaali Mustapha and Abdallah Oulmekki
12H20-12H40	ID56 : Temperature dependence on the lattice parameters variation in Lithium niobate Belbaraka Mohamed and Bouaza Smahan

SESSION 2 : SALLE DES REUNIONS 1 Hybrid Materials 1 Chairman: Pr M.LACHKAR	
11H00-11H20	ID 4 : The dielectric and electrical properties of conducting organic copolymers Hussam Bouaamlat, Nasr Hadi, Hayat Sadki, Oufae Ninis, Tajeddine Lamcharfi, Farid Abdi, Mohammed Bannani, Mohammed Bouachrine and Mustapha Abarkan
11H20-11H40	ID 5 : Synthesis, crystal structure, dielectric of two-dimensional Cd-based hybrid perovskite Tahiri Obaida, Kassou Said, El Mrabet Rajae, Ahabboud Malika, Belaaraj Abdesselam and Tajeddine Lamcharfi
11H40-12H00	ID 47 : Synthesis and crystal structure of new open framework metal oxalate (detn)M(C ₂ O ₄) ₂ (NO ₃)·2H ₂ O with M = Ni, Cu, (detn) = diethylenetriamine Mohamed Akouibaa, Rachid Ouarsal, Souad Chaouch, Aziz Tahiri Alaoui, Soûad Rakib, Brahim El Bali and Mohammed Lachkar
12H00-12H20	ID67 : Wettability and in vitro characterization of sol-gel derived SiO ₂ -CaO, SiO ₂ -CaO-Ag ₂ O, and SiO ₂ -CaO-P ₂ O ₅ -BaO bioglasses Bouhazma Sarra, Herradi Samaïel, Chajri Sanae, El Hachadi Ahmed, Bennouna F., Elabed S., Ibnsouda Koraichi S., El Bali B. and Lachkar M.
12H20-12H40	ID 50 A physicochemical study of a modified sol-gel derived Neodymium-hydroxyapatite Smaïel Herradi, Sara Bouhazma, Sanae Chajri, Ahmed El Hachadi, Mohamed Khaldi, Brahim El Bali and Mohammed Lachkar

SESSION 3 : SALLE DES CONFERENCES Electrical properties of ceramics Chairman: Pr N.MASAÏF	
14H30-14H50	ID32 : Effect of Barium doping on electrical and electromechanical properties of $(1-x)(\text{Na}_{0.5}\text{Bi}_{0.5})\text{TiO}_3\text{-xBaTiO}_3$ Mohammed Mesrar, Taj-Dine Lamcharfi, Nor-Said Echatoui, Farid Abdi and Fatima Zahra Ahijaje
14H50-15H10	ID36 : THE EFFECTS OF CALCINATION AND DOPING ON DIELECTRIC PROPERTIES OF $\text{CaCu}_{3-x}\text{Co}_x\text{Ti}_4\text{O}_{12}$ CERAMIC Nasr Hadi, Abdi Farid and Taj-Edine Lamcharfi
15H10-15H30	ID37 : Synthesis, Electrical Properties and Conduction Mechanism of $[\text{C}_6\text{H}_5\text{C}_2\text{H}_4\text{NH}_3]_2\text{ZnCl}_4$ Said Kassou, Naser Hadi, Najwa Gouitaa and Tajeddine Lamcharfi
15H30-15H50	ID40 : The study of the Dielectric properties, ac conductivity and thermal behaviour of ilmenite CdTiO_3 cadmium titanate ceramic. Radouane Bahloul, Salaheddine Sayouri and Tajeddine Lamcharfi
15H50-16H10	ID62 : Structural and dielectric properties of $\text{Ba}_{0.95}\text{Bi}_{0.05}\text{Ti}_{1-x}\text{Fe}_x\text{O}_3$ ceramics at $x=0.0, 0.1$ and 0.2 prepared by solid state method. Gouitaa Najwa, Lamcharfi Taj-Dine, Bouayad Lamfadal and Abdi Farid

SESSION 4 : SALLE DES REUNIONS 1 Organic and Phosphates Chairman: Pr M.BENZAKOUR	
14H30-14H50	ID51 : Synthesis and characterization of new rare earth diphosphates $\text{KLnP}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$ ($\text{Ln} = \text{Gd} (1), \text{Tb} (2), \text{Yb} (3)$) Aziz Alaoui Tahiri, Rachid Ouarsal, Brahim El Bali and Mohammed Lachkar
14H50-15H10	ID52 : Synthesis and characterization of new thallium dihydrogenediphosphates $\text{Ti}_2\text{M}(\text{H}_2\text{P}_2\text{O}_7)_2 \cdot 2\text{H}_2\text{O}$ [$\text{M} = \text{Mn} (1), \text{Co} (2)$ and $\text{Ni} (3)$] Aziz Alaoui Tahiri, Rachid Ouarsal, Brahim El Bali and Mohammed Lachkar
15H10-15H30	ID53 : Synthesis and structural characterization of organically templated cobalt phosphite $(\text{C}_4\text{N}_2\text{H}_{14})\text{Co}(\text{H}_2\text{PO}_3)_4 \cdot 2\text{H}_2\text{O}$ Najlae Hamdi, Souad Chaouch, Ivan Da Silva, Mohamed Ezahri, Brahim El Bali and Mohammed Lachkar
15H30-15H50	ID55 : Synthesis and characterization of lithium iron phosphate by solid-state reaction Safaa Hidaoui, Ahmed El Hachadi, Mohammed Khaldi, Brahim El Bali and Mohammed Lachkar
15H50-16H10	ID44 : Polyethylene glycol-10000 concentration effect on the phase evolution from Li_3PO_4 to LiMnPO_4 cathode material using a solvothermal process Redouan El Khalfaouy, Abdellah Addaou and Ahmed Lahsini

SESSION 5 : SALLE DES REUNIONS 1 Specific Materials Chairman: Pr M.ABARKAN	
16H30-16H50	ID9 : Raman spectra of thiophene (C ₄ H ₄ S) molecules encapsulated inside single walled boron nitride nanotube Aziz Alaoui Tahiri, Rachid Ouarsal, Brahim El Bali and Mohammed Lachkar
16H50-17H10	ID11 : Catalytic Oxidation of Isopropanol in the Liquid Phase at Low Temperature in the Presence of a Mixed Oxide Cr-Ni Younes Dehmani and Said Kassou
17H10-17H30	ID63 : Use of Naturel Clay for Adsorption of Textiles Dyes Zineb Bencehroun, Hicham Zaitan, Mohammed Kachabi, Mostapha Nawdali, Imane El Mrabet and Maria Isabel Pontes Correia Neves
17H30-17H50	ID59 : Investigation of structural and thermal behavior of polymer nanocomposites from natural clay: A comparative study Souad Ghyati, Mabrouk Benhamou, Mostapha El-Jai and Said Kassou
17H50-18H10	ID65 : Lignin Spectroscopic Study : Characterization of Syringyl and Guaiacyl components Somia Fellak and Abdellatif Boukir
18H10-18H30	ID30 : Molecular simulation and experimental studies of the solibility of cellulose by cuam El Amrani Abdessamad, Nour Mohamed and Chalioui Allal

SESSION 6 : SALLE DES REUNIONS 2 Theories, Methods and models Chairman: Pr M.KEROUAD	
16H30-16H50	ID2 : Resonance transparency in a mesoscopic ring threaded by a magnetic flux and side coupled to a quantum waveguide Mouadili Abdelkader, Labdouti Zayed, Mrabti Tarik and El Houssaine El Boudouti
16H50-17H10	ID6 : Plasmonic induced transparency in a compact graphene-based nanostructure Adnane Noual, Madiha Amrani, El Houssaine El Boudouti, Yan Pennec and Bahram Djafari-Rouhani
17H10-17H30	ID13 : Analysis of absorptance and reflectance characteristics in a four layers structure using transfer method for solar cells Bouchra Mokhtari, Nour El Houda Hissi, Mohammed Musa Shabat, Noureddine Cherkaoui Eddeqai, Abdenbi Bouzid and Ahmed Roukhe
17H30-17H50	ID29 : An effective field theory study of the electrocaloric effect in ferroelectric thin-films Mustapha Tarnaoui, Malika Zaim, Ahmed Zaim and Mohammed Kerouad
17H50-18H10	ID39 : Magnetocaloric effect and magnetic properties of core-shell ferrimagnetic nanoparticle : A Monte carlo study Malika Zaim, Mustapha Tarnaoui, Ahmed Zaim and Mohamed Kerouad
18H10-18H30	ID57 : The phase diagrams of double perovskite Sr ₂ CrIrO ₆ : Monte Carlo study Othmane Amhoud, Noura Zaim, Ahmed Zaim and Mohamed Kerouad

SESSION 7 : SALLE DES CONFERENCES Synthesis & structure 2 Chairman: Pr A.BOUZID	
10H30-10H50	ID20 : INFLUENCE OF GADOLINIUM ON THE PHYSICAL CHARACTERISTICS OF TITANIUM BARIUM MATERIAL Lamiae Mrharrab, Yahya Ababou, Salaheddine Sayouri and Abdelhalim Elbasset
10H50-11H10	ID42 : Synthèse et Caractérisation des Composés de Structure Pérovskite $Pb_{1-x}Fe_x(Zr_{0.52}Ti_{0.48})_{1-x/4}O_3$ (PFZT) avec ($0 \leq x \leq 20\%$) Ahabboud Malika, Lamcharfi Taj-Dine, Abdi Farid and Ahjyaje Fatima Zahra
11H10-11H30	ID25 : Caractérisation par Spectroscopie Raman des Matériaux $BaTiO_3$ dopé avec Mg ($Ba_{1-x}Mg_xTiO_3$) élaboré par voie sol-gel Elghadraoui Oufae, Zouhairi Mohammed, Harrach Ahmed, Lamcharfi Tai-Edine, Abdi Farid and El Ghadraoui El Houssine
11H30-11H50	ID14 : L'effet du dopage de Cuivre sur les propriétés structurales et diélectriques de $BaTi_{0.9}Zr_{0.1}O_3$ Mohammed Amrani Joutei, Ahmed Harrach, Tajeddine Lamcharfi, Farid Abdi, Mohammed Zouhairi and Fatima Zahra Ahjyaje
11H50-12H10	ID16 : Influence of Manganese content on the structural and thermal properties of some manganese-phosphate glasses Meryem Jerroudi, Lahcen Bih, Mohamed Azrour, Bouchaib Manoun and Peter Lazor
12H10-12H30	ID38 : STUDY OF THE DIELECTRIC, OPTICAL AND MICRO-STRUCTURE PROPERTIES OF $(1-x)CaCu_3Ti_4O_{12}-(x)PbZr_{0.48}Ti_{0.52}O_3$ COMPOSITE Nasr Hadi, Taj-Edine Lamcharfi, Abdi Farid, Abdesselam Belaaraj, Said Kassou and Fatima Zahra Ahjya

SESSION 8 : SALLE DES REUNIONS 1 Hybrid Materials 2 Chairman: Pr A.BOUKIR	
10H30-10H50	ID3 : Conducting polymers: Comprehensive analysis of the coating/electrode contact zone Abdelqader El Guerra, Mimouna Bouabdallaoui, Zineb Aouzal, Sana Ben Jadi, Mohammed Bazzaoui and El Arbi Bazzaoui
10H50-11H10	ID54 : Synthesis, crystal structure and thermal behavior of a new hybrid sulfate: $[(C_6H_{16}N_2)Mg(H_2O)_6]_{0.5}SO_4 \cdot H_2O$ Souad Chaouch, Najlaa Hamdi, Mohamed Khaldi, Mohamed Ezahri, Brahim El Bali and Mohammed Lachkar
11H10-11H30	ID17 : Density measurements and thermal stability of phosphate glasses belonging to $LiCl-Li_2O-P_2O_5$ system Lhoucine Naanaï, Lahcen Bih, Mohamed Azrour, Bouchaib Manoun and Peter Lazor
11H30-11H50	ID18 : Structure and thermal stability of phosphate glasses in the $MoO_3-CoO-P_2O_5$ system Benzineb Meryem, Bih Lahcen, Azrour Mohamed, Manoun Bouchaib and Lazor Peter
11H50-12H10	ID61 : Analysis study of structure defects in $LiTaO_3$ (LT) and $LiNbO_3$ (LN) single crystals Jaafar Khalfaoui, Farid Abdi, Taj-Edine Lamcharfi and Nor-Said Echatoui
12H10-12H30	ID45 : Effect of cement on Mechanical Properties of Bricks Mesrar Hamza, Jabrane Raouf and Mesrar Laila

POSTERS : HALL

ID1: THEORETICAL AND EXPERIMENTAL LINEAR OPTICAL AND DIELECTRIC PROPERTIES OF MIXED PEROVSKITES $PB(1-X)MG(X)TiO_3$ WITH $X=0.2$ AND 0.5

OBAIDA TAHIRI, SAID KASSOU, NASR HADI, RAJAE EL MRABET, ABDESSELAM BELAARAJ, TAJEDDINE LAMCHARFI

ID7: YTTRIUM EFFECTS ON STRUCTURAL PROPERTIES OF BARIUM TITANATE CERAMICS

AZIZ NFISSI

ID8: DIELECTRIC AND ELECTRIC BEHAVIOR OF A NOVEL ORGANIC-INORGANIC HYBRID CO-BASED

RAJAE EL MRABET.

ID10: 2D LAYERED MULTIFUNCTIONAL MATERIAL: GROWTH, OPTICAL AND ELECTRONIC PROPERTIES

SAID KASSOU

ID12: ABSORPTION ENHANCEMENT IN GRAPHENE-BASED ABSORBERS AT VISIBLE AND NEAR-INFRARED RANGE

NOUR EL HOUDA HISSI, BOUCHRA MOKHTARI, MOHAMMED M. SHABAT SHABAT, NOUREDDINE CHERKAoui EDDEQAQI, ABDENBI BOUZID AND AHMED ROUKHE

ID15: ETUDE DES PROPRIETES STRUCTURALES DE $Ba_{0.9}Zr_{0.1}O_3$ DOPE AU MAGNESIUM ELABORES PAR DEUX METHODES DIFFERENTES

MOHAMMED AMRANI JOUTEL, TAJEDDINE LAMCHARFI, AHMED HARRACH, FARID ABDI, MOHAMMED ZOUHAIRI AND MALAK SLAoui

ID19: ELABORATION ET ETUDE PHYSICO-CHIMIQUE DES PEROVSKITES HYBRIDES

FATIMA ZAHRA AHJYAJE, MALAK SLAoui, TAJDINE LAMCHARFI, FARID ABDI AND AHMED HARRACH

ID21: ETUDE DES PROPRIETES STRUCTURALES ET DIELECTRIQUES DU MATERIAU $BaTiO_3$ DOPE AU NICKEL

HAFES ED-DNOUB, OUAFAR EL GHADRAoui, MOHAMMED ZOUHAIRI, AHMED HARRACH, TAJEDDINE LAMCHARFI AND EL HOUSSINE EL GHADRAoui

ID22: INFLUENCE DU STRONTIUM SUR LES PROPRIETES STRUCTURALES ET DIELECTRIQUES DE $PbTiO_3$ ELABORES PAR VOIE SOLIDE ET HYDROTHERMALE

EL HOUCINE LAHRAR, EL HOUSSINE EL GHADRAoui, AHMED HARRACH, MOHAMMED ZOUHAIRI AND TAJEDDINE LAMCHARFI

ID24: SYNTHÈSE ET CARACTÉRISATION PHYSICOCHIMIQUES DES NOUVEAUX MATERIAUX CERAMIQUES DE TYPE PEROVSKITE A BASE DE TITANATE DE STRONTIUM $SrTiO_3$

ISSAM ALAoui, EL HOUSSINE EL GHADRAoui, MOHAMMED ZOUHAIRI, AHMED HARRACH AND TAJEDDINE LAMCHARFI

ID26: ETUDE DES PROPRIETES PHYSICO-CHIMIQUES DES MATERIAUX $Ba_{1-x}Mg_xTiO_3$ ELABORES PAR VOIE SOL-GEL

ELGHADRAoui OUFAE, ZOUHAIRI MOHAMMED, AHMED HARRACH, TAJ-DINE LAMCHARFI, ABDI FARID AND EL HOUSSINE ELGHADRAoui

ID27: ETUDE PHYSICO-CHIMIQUES DES MATERIAUX DE TYPE PEROVSKITE $Pb_{1-x}Y_xTi_{1-x/4}O_3$ ELABORES PAR VOIE HYDROTHERMALE

ELGHADRAoui OUFAE, ZOUHAIRI MOHAMMED, TAJ-DINE LAMCHARFI, AHMED HARRACH, ABDI FARID AND EL HOUSSINE ELGHADRAoui

ID31: $(1-x)(Na_{0.5}Bi_{0.5})TiO_3-x(K_{0.5}Bi_{0.5})TiO_3$ (NBT-XKBT) SYSTEM: A STRUCTURAL AND DIELECTRIC STUDY

MOHAMMED MESRAR, TAJ-DINE LAMCHARFI, NOR-SAID ECHAToui, FARID ABDI AND FATIMA ZAHRA AHJYAJE

ID33: ENHANCING DIELECTRIC PROPERTIES IN $(1-X)(\text{Na}_{0.5}\text{Bi}_{0.5})\text{TiO}_3\text{-xBaTiO}_3$ LEAD-FREE PIEZOELECTRIC CERAMICS BY THE HYDROTHERMAL METHOD

MOHAMMED MESRAR, TAJ-DINE LAMCHARFI, NOR-SAID ECHATOU, FARID ABDI AND AHMED HARRACH

ID35: EFFECTS OF DIFFERENT SYNTHESIZING METHODS ON THE DIELECTRIC AND PIEZOELECTRIC PROPERTIES OF $(1-X)(\text{Na}_{0.5}\text{Bi}_{0.5})\text{TiO}_3\text{-xBaTiO}_3$ CERAMICS

MOHAMMED MESRAR, TAJ-DINE LAMCHARFI, NOR-SAID ECHATOU AND FARID ABDI

ID41: STRUCTURAL, DIELECTRIC AND ELECTRICAL PROPERTIES OF $\text{BaTi}_{0.8}\text{-xFe}_{0.2}\text{Zr}_{\text{x}}\text{O}_3$ CERAMICS AT $x=0.00, 0.05$ AND 0.10 PREPARED BY SOLID STATE METHOD

GOUITAA NAJWA, LAMCHARFI TAJ-DINE, BOUAYAD LAMFADDAL, ABDI FARID AND NACIRI BENNANI MOHAMMED

ID43: ELABORATION ET CARACTÉRISATION DES COMPOSÉS DE STRUCTURE PÉROVSKITE DE FORMULE $\text{PB}_{1-x}\text{Bi}_x(\text{Zr}_{0.48}\text{Ti}_{0.52})_{1-x/4}\text{O}_3$ ($x=5\%, 10\%, 20\%$)

AHABBOUD MALIKA, LAMCHARFI TAJ-DINE, ABDI FARID, AHJYAJE FATIMA ZAHRA AND ZOUHAIRI MOHAMMED

ID46: STRUCTURAL AND VIBRATIONAL STUDY OF DIAMMONIUM TRIS [HEXAQUACOBALT(II)] TETRAKIS [HYDROGENPHOSPHATE(III)]: $(\text{NH}_4)_2[\text{Co}(\text{H}_2\text{O})_6]_3(\text{HPO}_3)_4$

MOHAMED AKOUIBAA, RACHID OUARSAL, SOUAD CHAOUCH, AZIZ TAHIRI ALAOU, SOUAD RAKIB, BRAHIM EL BALI AND MOHAMMED LACHKAR

ID48: SYNTHESIS, CHARACTERIZATION AND VIBRATIONAL STUDY OF DIPOTASSIUM COBALT(II) BIS(HYDROGENE-PHOSPHITE) DIHYDRATE $\text{K}_2\text{Co}(\text{HPO}_3)_2 \cdot 2\text{H}_2\text{O}$

MOHAMED AKOUIBAA, SOUAD CHAOUCH, RACHID OUARSAL, ALAOUI TAHIRI AZIZ, SOUAD RAKIB, BRAHIM EL BALI AND MOHAMMED LACHKAR

ID58: STUDY OF STRUCTURAL, ELECTRICAL AND DIELECTRIC PROPERTIES OF PURE AND MG-DOPED LiTaO_3 CERAMIC

JAAFAR KHALFAOUI, TAJ-EDINE LAMCHARFI, FARID ABDI, ABDELHADI KASSIBA AND NOR-SAID ECHATOU

ID64: SYNTHESIS OF NEW MATERIAL CONTAINING THE PYRAZOLONE RING SYSTEM

GHANDOUR ISMAIL, BOUAYAD ABDELOUAHED, CHAKROUNE SAID, KANDI RODI YOUSSEF AND BOUAYAD KAOUTAR.

ID 49: Structure cristalline et spectroscopique de $\text{NaM}(\text{H}_2\text{PO}_3)_3 \cdot \text{H}_2\text{O}$, $M = \text{Mn, Co, Ni, Zn, Mg et Cd}$

MOHAMED AKOUIBAA, SOUAD CHAOUCH, RACHID OUARSAL, SOUAD RAKIB, BRAHIM EL BALI AND MOHAMMED LACHKAR

ID68: Use of Combination of Coagulation and Adsorption for the Landfill Leachate Treatment from Fez City

EL MRABET IMANE, BENCHEQROUN ZINEB, CHAOUKI ZINEB, KACHABI MOHAMMED, NAWDALI MOSTAPHA AND ZAITAN HICHAM

ID69: Use of Powder Activated Carbon for Adsorption of Wastewater

KACHABI MOHAMMED, NAWDALI MOSTAPHA NAWDALI AND ZAITAN HICHAM