

**Faculté/Institut : Sciences exactes**

**Département : Physique**

<b>1- Identification du laboratoire/Unité de recherche</b>		
Unité de Recherche Sciences des Matériaux et Applications		اسم المخبر
Intitulé du Laboratoire	Unité de Recherche Sciences des Matériaux et Applications	
Acronyme du labo	<u>URSMA</u>	
Adresse électronique		
Site web ou URL		
Année d'Agrément :	2012	

<b>2- Directeur du laboratoire/Unité de recherche</b>		
Nom & Prénom	HAMANA	Djamel
Adresse Electronique	d_hamana@hotmail.com	
Nombre Equipes :	09	

<b>3- Présentation du laboratoire</b>		

<b>4- Chefs d'équipes</b>		
.Titre de l'Equipe1	Etude des Tranitions de Phases dans les alliages métalliques	
Nom - Chef d'équipe <sup>1</sup>	HAMANA	Djamel
.Titre de l'Equipe2	Comportement mécanique et microstructure des matériaux	
Nom - Chef d'équipe <sup>2</sup>	<b>KHIRREDINE-Thabet</b>	Djamila
.Titre de l'Equipe3	<b>Etude des biomatériaux dentaires</b>	
Nom - Chef d'équipe <sup>3</sup>	CHEKROUD	Said
.Titre de l'Equipe4	Caractérisation et a valorisation des géomatériaux	
Nom - Chef d'équipe <sup>4</sup>	BOUCHEAR	Merzoug
Titre de l'Equipe5	Nanomatériaux et nanotechnologie	
Nom - Chef d'équipe <sup>5</sup>	HADJADJ	Lakhder
Titre de l'Equipe 6	Etude des aciers. Applications industrielles	
Nom - Chef d'équipe <sup>6</sup>	BOUTEFNOUCHET	Abdelatif
Titre de l'Equipe 7	Propriétés électriques et magnétiques des matériaux	
Nom - Chef d'équipe <sup>7</sup>	MOSBAH	Med Fayçal
Titre de l'Equipe 8	Procédés, Environnement, Pharmacotechnique et composites	
Nom - Chef d'équipe <sup>8</sup>	BOUZID	Djallel
Titre de l'Equipe 9	Nanomatériaux et microstructures	
Nom - Chef d'équipe <sup>9</sup>	ACHOUR	Slimane

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## 5- Liste des publications :

- 1 - **D. Hamana**, L. Amieur, L. Chetibi, F. Hanini., "The possibility of New Ordering Reaction in Cu-50 wt % Au alloy», *Materials Transactions*, Vol. 52, No. 6 pp. 1132 to 1137 (2011).
- 2 - I. Golovin, Z. Belamri, **D. Hamana**., "Internal friction, dilatometric and calorimetric study of anelasticity in Fe-13 at.% Ga and Fe-8 at.% Al-3 at.% Ga alloys, *Jour. of Alloys and Compounds*, 509, 8065 (2011).
- 3 - **D. Hamana**, M. Hachouf; L. Boumaza, Z.E. Biskri, «Precipitation mechanism in Cu-7 wt. % Ag alloy, *Materials Sciences and Applications*, 2, 899 (2011).
- 4- I.S. Golovin, M.Y. Zadarojni, A.S. Bykov et D. Hamana, "Dépendance en température et mécanisme du frottement intérieur dans les alliages du système Al-Mg", *Déformation et Rupture des Matériaux*, n° 6, 22 (2012) (en russe).
5. **S. Menassel**, **M-F. Mosbah**, S. P. Altintas, A. Varilci, and **F. Bouaicha**, "Synthesis of BiSrCa(Y)CuO superconductor from the sol-gel method and the effect of Y substitution." *AIP Conference Proceedings* 1476 (2012) 374-377. [http://proceedings.aip.org/resource/2/apcpcs/1476/1/374\\_1?bypassSSO=1](http://proceedings.aip.org/resource/2/apcpcs/1476/1/374_1?bypassSSO=1).
- 6- S. Achour, A. Harabi, N. Karboua, Effect of thickness and orientation of alumina fibrous thermal insulation on microwave heating in a modified domestic 2.45 GHz multi-mode cavity. , [International Journal of Applied Ceramic Technology](#), vol. 9 (2012).
- 6- S. Chaguetmi, F. Mammeri, M. Pasut, S. Nowak , H. Lecoq, P. Decorse, C. Costentin, S. Achour, S. Ammar, Synergetic effect of CdS quantum dots and TiO<sub>2</sub> nanofibers for photoelectrochemical hydrogen generation *J Nanopart Res.* Vol. 15 (2013) 2140.
- 8- Samiha Chaguetmi, Fayna Mammeri, Sophie Nowak, Philippe Decorse, Hélène Lecoq, Meriem Gaceur, Jamila Ben Naceur, Slimane Achour, Radhouane Chtourou and Souad Ammar, Photocatalytic activity of TiO<sub>2</sub> nanofibers sensitized with ZnS quantum dots, *RSC Adv.*, 3 (2013) 2572-2580.
- 9- Zehira Belamri, Djamel Hamana, Igor S. Golovin, Study of order-disorder transitions in Fe-Ge alloys and related anelastic phenomena, *Journal of Alloys and Compounds* 554 (2013) 348–356.
- 10 - Z. Belamri, D. Hamana, I.S. Golovin, Study of ordering in Fe-25%Al-Cr alloys by dilatometry, heat flow and mechanical spectroscopy, *Monthly International Research Journal, Metallofizika i Noveishie Tekhnologii*, Kiev, Ukraine, 2013, T. 35, N°2, cc, 209-223.
- 11 - N. Sobti, A. Bensouici, F. Coloma, C. Untiedt, S. Achour, Structural and photoelectrochemical properties of porous TiO<sub>2</sub> nanofibers decorated with Fe<sub>2</sub>O<sub>3</sub> by sol-flame. *J Nanopart Res.* 16 (2014) 2577.
- 12 - Kendouli, S.; Khalfallah, O. Sobti, N. Bensouissi, A. Avci, A. Eskizeybek, S. Achour, Modification of cellulose acetate nanofibers with PVP/Ag addition., *Materials Science in Semiconductor Processing*, vol. 28 (2014).
- 13- Lakehal, S. Achour, S. Ferrari, C. Buffani, E. Rossi, F. Fabri, Photoelectrochemical properties of ZnO nanorods decorated with Cu and Cu<sub>2</sub>O nanoparticles. *Superlattices and Microstructures*, vol. 72 (2014).
- 14- S. Sedira, S. Achour, S. Avci, A. Eskizeybek, V. Physical deposition of carbon doped titanium nitride film by DC magnetron sputtering for metallic implant coating use., *Applied Surface Science*, vol. 295

(2014).

- 15- L. Chetibi, D. Hamana, S. Achour, Growth and characterization of hydroxyapatite nanorice on TiO<sub>2</sub> nanofibers., *Materials Chemistry and Physics*, vol. 144 (2014).
- 16- S. Sedira, A.A. Ayachi, A.A, S. Lakehal, M. Fateh, S. Achour, Silver nanoparticles in combination with acetic acid and zinc oxide quantum dots for antibacterial activities improvement - A comparative study, *Applied Surface Science*, vol. 311 (2014).
- 17- Loubna Chetibi, Amine Achour, Jerzy Peszke, Djamel Hamana , Slimane Achour Hydroxyapatite growth on multiwall carbon nanotubes grown on titanium fibers from a titanium sheet. *J Mater Sci* vol. 49 (2014).
- 18- KOUTCHOUKALI Riad, HAMANA Djamel, BOUCHEAR Merzoug, CHEKROUD Said, « La reconstruction en vitrocéramiques des dents antérieures », *Journal Algérien de Médecine (JAM)* 2014.
- 19- L. Amieur, S. Mermoul, D. Hamana, “Study of the influence of silver Addition on the order-disorder Transformation in Cu-Au System”, *Physics Procedia*, V55, 30-34 (2014).
- 20- Ayachi, A.A. Mechakra, H. Silvan, M.M. Boudjaadar, S. Achour, Monodisperse  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanoplatelets: Synthesis and characterization. *Ceramics International*, vol. 41 (2015).
- 21- M. Hachouf, D. Hamana, “Study of the non-isothermal microstructural evolution of deformed Cu-15wt %In and Cu-wt % Sb alloys by means of X-ray diffraction and dilatometry”, *Journal of Alloys and Compounds*, V622, p.29-36, 2015.
- 22 - I. Golovin, V.V. Palacheva, L.Yu. Dubov, Yu.V. Funtikov, J. Cifre, D. Hamana, "Study of ordering and properties in Fe-Ga alloy with 18 and 21 at Ga, *Metallurgical and Materials Transactions A V* 46A, p. 1131-1139, 2015.
- 23 - D. Hamana, M. Hachouf, Precipitation and dissolution-grains growth effects and kinetics during non-isothermal heating of deformed Cu-7 wt.% Ag alloy. 2016 DOI :10.1007/s10973-015-5066-2.
- 24- **Benhamada M., Bouzid D., Saouli O.,** Boyron O., The effects of hydrothermal aging characterized by sec on the degradations kinetics of polycarbonate calculated through TGA, *Chemical Engineering Transactions*, 43, 1183-1188. 2015.
- 25- **O. Saouli,** M. Bencheikh-Lehocine. Three-dimensional modelling of reactive solutes transport in porous media, *Chemical Engineering Transactions*, 41, 151-156, 2014.
- 26- **S. Attaf, M.F. Mosbah,** R. Fittipaldi, D. Zola, S. Pace, A. Vecchione, "Effect of double substitution on structural and magnetic properties of Y<sub>1-x</sub>Ca<sub>x</sub>Ba<sub>2</sub>(Cu<sub>1-y</sub>Mg<sub>y</sub>)<sub>3</sub>O<sub>7-d</sub>." *Physica C* 477 (2012) 36.  
<http://www.sciencedirect.com/science/article/pii/S0921453412000731>
- 27- **N. Boussouf, M.-F. Mosbah, F. Bouaïcha,** A. Amira, Y. Boudjadja, A. Saoudel, "Effect of Magnesium on the Bi-based (2212) Superconductors." *Planetary Scientific Research Center Proceeding N° 5. Jan. 7-8, 2012 Dubai ISBN: 978-81-922428-4-2 pp 318-321.*  
<http://pscentre.org/images/extraimages/0112313.pdf>
- 28- **F. Bouaïcha, M.-F. Mosbah, N. Boussouf,** A. Amira, Y. Boudjadja, A. Saoudel, "Structural Properties of Zn Doped on Bi(Pb)2212 compound." *Planetary Scientific Research Center Proceeding N° 5. Jan. 7-8, 2012 Dubai ISBN: 978-81-922428-4-2 pp 458-461.*  
<http://pscentre.org/images/extraimages/0112350.pdf>
- 29- **S. Attaf, M.-F. Mosbah,** A. Vecchione, R. Fittipaldi, " The influence of doping with Ca and Mg in

- YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> ceramic." EPJ Web of Conferences 29 (2012) 00003. [http://www.epj-conferences.org/articles/epjconf/abs/2012/11/epjconf\\_emm2012\\_00003/epjconf\\_emm2012\\_00003.html](http://www.epj-conferences.org/articles/epjconf/abs/2012/11/epjconf_emm2012_00003/epjconf_emm2012_00003.html)
- 30- **S. Menassel, M-F. Mosbah, S. P. Altintas, A. Varilci, and F. Bouaicha**, "Synthesis of BiSrCa(Y)CuO superconductor from the sol-gel method and the effect of Y substitution." AIP Conference Proceedings 1476 (2012) 374-377. [http://proceedings.aip.org/resource/2/apcpcs/1476/1/374\\_1?bypassSSO=1](http://proceedings.aip.org/resource/2/apcpcs/1476/1/374_1?bypassSSO=1)
- 31- **F. Bouaïcha, M-F. Mosbah, M. Hamel, F. Benmaamar, A. Amira, T. Guerfi, A. Haouam, L. Ozyuzer**, "Effect of Al Substitution on Structural and Electrical Properties of Bi<sub>1.6</sub>Pb<sub>0.4</sub>Sr<sub>2</sub>CaCu<sub>2-x</sub>M<sub>x</sub>O<sub>8+δ</sub> Superconducting Ceramics." Journal of Superconductivity and Novel Magnetism 26 (2013) 1099. <http://link.springer.com/article/10.1007/s10948-012-1918-1>
- 32- **N. Boussouf, M-F. Mosbah, A. Amira, A. Varilci, S. P. Altintas, M. Guerioune**, "Effect of ZrO<sub>2</sub> Addition on Microstructure, Transport and Magnetic Properties of Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>8+δ</sub> System." Journal of Superconductivity and Novel Magnetism 26 (2013) 1105. <http://link.springer.com/article/10.1007/s10948-012-1977-3>
- 33- **N. Boussouf, M-F. Mosbah**, " Effects of BCO<sub>3</sub> Addition on the Formation and Properties of the Bi-Based Superconductors." Journal of Superconductivity and Novel Magnetism 26 (2013) 2891. <http://link.springer.com/article/10.1007/s10948-012-2091-2>
- 34- **N. Boussouf, M-F. Mosbah**, " The effect of manganese on phase formation and properties of Bi2212 ceramics." Journal of Materials Science: Materials in Electronics August 2013 DOI 10.1007/s10854-013-1419-4 <http://link.springer.com/article/10.1007/s10854-013-1419-4>
- 35- **T. Guerfi**, Book chapter : " Superconductivity Driven by Anti-polar Phase in High Temperature Superconducting Materials" pp-55-74, " in Christopher. B. Taylor Ed, "Recent Advances in Superconductivity Research" Nova Sciences Publishers, 2013, New York, USA. [https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=37950&osCsid=a06b0ed0408f1d611bee88f4333afa61](https://www.novapublishers.com/catalog/product_info.php?products_id=37950&osCsid=a06b0ed0408f1d611bee88f4333afa61)
- 36- **T. Guerfi** 'Evidence for an Antipolar phase in High Temperature Superconducting Materials ' International Journal of Condensed Matter, Advanced Materials, and Superconductivity Research Vol. 12, N° 4 March (2013), Nova Science Publishers, New York, USA. [https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=47181&osCsid=a06b0ed0408f1d611bee88f4333afa61](https://www.novapublishers.com/catalog/product_info.php?products_id=47181&osCsid=a06b0ed0408f1d611bee88f4333afa61)
- 37- **L. Yahia, E. Nouicer, F.Z. Benlahache et M.H. Khireddine**, Etude comparative de la passivation entre l'alliage de titane Ti6Al4V et l'acier inoxydable 304L en milieu NaCl 3%, *Physical and Chemical News*, 59 (2011)7-12. [http://www.pcnjournal.com/volume\\_59\\_may\\_2011\\_1555.htm](http://www.pcnjournal.com/volume_59_may_2011_1555.htm)
- 38- **H. Djaaboube, D. Thabet-Khireddine**, TEM diffraction study of Al<sub>2</sub>CuMg(S'/S) precipitation in Al-Li-Cu-Mg (Zr) alloy, Philosophical Magazine, Vol. 92, Issue 15 (2012), pp. 1876-1889. **Doi: 10.1080/14786435.2012.659288.**
- 39- **L. HADJADJ, R. AMIRA and M. BOUCHEAR**, International Journal of Modern Phys. B, 26, 19 (2012) 1-8.
- 40- **B. HANNACHE, D. BAZIN, A. BOUTEFNOUCHET, M. DAUDON**, Effet des extraits de plantes médicinales sur la dissolution des calculs rénaux de cystine in vitro : étude à l'échelle mésoscopique. Progrès en urologie, 2012, <http://dx.doi.org/10.1016/j.purol.2012.06.001>.
- 41- **B. HANNACHE, A. BOUTEFNOUCHET, D. BAZIN, M. DAUDON**, Nature et rôle des éléments traces dans les calculs urinaires, Progrès en urologie, 2014. <http://dx.doi.org/10.1016/j.purol.2014.09.038>.

- 42-** S. Bouslama, A. Boutefnouchet, B. Hannache, T. Djemil, A. Kadi, A. Dahdouh, S. Sakaa, M. Daudon, Détermination de la composition de 359 calculs du haut appareil urinaire collectés dans la région Est-algérien, *Progrès en Urologie*, 2015, <http://dx.doi.org/10.1016/j.purol.2015.09.017>.
- 43-** M. Benyamina, M. Boucheur, Physico-Chemical Characterization of Limestones and Sandstones in a Complex Geological Context, Example North-East Constantine: Preliminary Results, Vol. 5, No. 1, pp 114-118.