CURRECULUM VITAE

1- PERSONAL DATA

Name: KHENATA RABAH
Designation: Full Professor.
Date and Place of Birth: 27 January 1967 - El Hachem- Algeria
Nationality: Algerian
Qualification: Computational Physics, Materials Physics, PhD.
Office Address: Department of Physics, Faculty of Science, University of Mascara, P. B. 763-29000 Mascara, Algeria.
Home Address: City of 28 logts, Bld. B6-Tizi-Mascara-29000

Mobile Phone: 00213554675133
Emails: khenata_rabah@yahoo.fr
rabah_khenata@univ-mascara.dz
rabahkhen@gmail.com

2- EDUCATION

July 1987 Baccalaureate (Mathematic), - (Mascara-Algeria)
July 1992 "Engineer in electronics", University of Sidi Bel Abbès- Algeria
July 1995 Magister in Physics, University of Sidi-Bel Abbès- Algeria
June 2005 Ph.D (Doctorat), University of Sidi-Bel Abbès- Algeria

3- EMPLOYMENT HISTORY

1992-1993 Assistant Professor, Institute of Science- Sidi Bel Abbès University.
1995-2004 Assistant Professor of Physics, Institute of Biology- Mascara University.
2005-2009, Associate Professor of Physics, Faculty of Sciences and Technology at Mascara University.
2010-2017, Professor of Physics, Faculty of Sciences and Technology at Mascara University.

4- RESEARCH ACTIVITIES

In our research, we use the program package WIEN2k, which allows to performing electronic structure calculations of solids using density functional theory (DFT). It is based on the full-potential (linearized) augmented plane-wave ((L)APW) + local orbitals (lo) method, one among the most accurate schemes for band structure calculations. In DFT the local (spin) density approximation (LDA) or the improved version of the generalized gradient approximation (GGA) can be used. WIEN2k is an all-electron scheme including relativistic effects and has many features. Using this program we can studied: the structural (Structural stability, transition pressures), the mechanical (elastic properties), electronic (Band structure,

energy gaps, density of states, bonding properties) and optical properties; including the different optical transitions, refractive index, reflectivity, loss function, of solids. The effect of pressure and temperature on different physical properties can also study. The Plane Wave Pseudo potential PWP as well as FPLMTO methods are also used to calculate the above properties.

5-SCIENTIFIC PRODUCTIONS:

5-1. PUBLICATIONS in (ISI)

https://www.researchgate.net/profile/Rabah_Khenata
https://scholar.google.com/citations?user=4FYHetYAAAAJ&hl=fr

With h-index: 35 in Googlescholar with More than 5000 Citations

1. D.P. Rai, Sanddeep, A. Shankar, Anup Pradhan Sakhya, T.P. Sinha, P. Grima-Gallardo, H. Cabrera, R. Khenata, M.P. Ghimire, R.K. Thapa: ***Electronic, optical and thermoelectric properties of bulk and surface (001) CuInTe2: A first principles study***. Journal of Alloys and Compounds 01/2017;, DOI:10.1016/j.jallcom.2016.12.443

2. Sandeep; Rai, D. P.; Shankar, A.; et al.; I**nvestigation of the structural, electronic and optical properties of the cubic RbMF3 perovskites (M = Be, Mg, Ca, Sr and Ba) using modified Becke-Johnson exchange potential** ; MATERIALS CHEMISTRY AND PHYSICS Volume: 192 Pages: 282-290 Published: MAY 1 2017

3. Amimour, B.; Slimani, M.; Sifi, C.; et al. ;**Computational investigations of the band structure and thermodynamic properties of calcium-doped BaS using the FP-LAPW approach**; CHINESE JOURNAL OF PHYSICS Volume: 55 Issue: 2 Pages: 367-377 Published: APR 2017

4. Zenasni, M.; Monir, Mohammed El Amine; Baltach, H.; et al.; **First-principles investigation on the mechanical and electronic properties of novel Pb1-xCexY alloys (Y = S, Se, and Te): an ab initio study** ;MATERIALS RESEARCH EXPRESS Volume: 4 Issue: 9 Article Number: 095903 Published: SEP 2017

5. Drablia, S.; Boukhris, N.; Boulechfar, R.; et al. ; **Ab initio calculations of the structural, electronic, thermodynamic and thermal properties of**

BaSe1-xTex alloys; PHYSICA SCRIPTA Volume: 92 Issue: 10 Article Number: 105701 Published: OCT 2017

6. D. P. Rai, Sandeep, A. Shankar, R. Khenata, A. H. Reshak, C. E. Ekuma, R. K. Thapa, San-Huang Ke: ***Electronic, optical, and thermoelectric properties of Fe 2+ x V 1− x Al***. AIP Advances 04/2017; 7(4):045118., DOI:10.1063/1.4982671

7. Monir, Mohammed El Amine; Ullah, Hayat; Baltach, Hadj; et al.;**Mechanical and magneto-electronic properties of half-metallic ferromagnetism in Ti-doped ZnSe and CdSe alloys: Ab initio study**; JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS Volume: 442 Pages: 107-117 Published: NOV 15 2017

8. K. Boudiaf, A. Bouhemadou, O. Boudrifa, K. Haddadi, F. Saad Saoud, R. Khenata, Y. Al-Douri, S. Bin-Omran, M. A. Ghebouli: ***Structural, Elastic, Electronic and Optical Properties of LaOAgS-Type Silver Fluoride Chalcogenides: First-Principles Study***. Journal of Electronic Materials 03/2017;, DOI:10.1007/s11664-017-5452-6

9. L. Tairi, S. Touam, A. Boumaza, M. Boukhtouta, H. Meradji, S. Ghemid, S. Bin Omran, F. El Haj Hassan, R. Khenata: ***Phase stability and electronic behavior of MgS, MgSe and MgTe compounds***. Phase Transitions 03/2017;, DOI:10.1080/01411594.2017.1302085

10. Roopam Sharma, Namita Singh, Khurshid Akhtar, R. Khenata, Dinesh Varshney: ***Phonon drag and carrier diffusion contribution to heat transport of superconductor MgB 2***. International Journal of Computational Materials International Journal of Computational Materials Science and Engineeringnce and Engineering 03/2017;, DOI:10.1142/S2047684117500087

11. T. Chihi, A. Bouhemadou, M. Reffas, R. Khenata, M.A. Ghebouli, B. Ghebouli, L. Louail: ***Structural, elastic and thermodynamic properties of iron carbide Fe 7 C 3 phases: an ab initio study***. DOI:10.1016/j.cjph.2016.12.014

12. A. K. Kushwaha, R. Khenata, A. Bouhemadou, S. Bin-Omran, K. Haddadi: Lattice ***Dynamical Properties and Elastic Constants of the Ternary Chalcopyrite Compounds CuAlS2, CuGaS2, CuInS2, and AgGaS2***. Journal of Electronic Materials 02/2017;, DOI:10.1007/s11664-017-5290-6

13. Raed Jaradat, Mohammed Abu-Jafar, Issam Abdelraziq, Rabah Khenata, Dinesh Varshney, Saad Bin Omran, Samah Al-Qaisi: ***High-pressure structural phase transition and electronic properties of the alkali hydrides compounds XH (X D Li, Na)***. Phase Transitions 02/2017;, DOI:10.1080/01411594.2017.1286488

14. N. Ali, A. Hussain, R. Ahmed, W. N. Wan Shamsuri, Naser M. Abdel Salam, R. Khenata: **Fabrication *and characterization of 150 nm tin antimony sulfide thin films, a promising window layer material for homojunction solar cells***. Applied Physics A 02/2017; 123(4):242., DOI:10.1007/s00339-017-0879-4

15. Mohammed El Amine Monir, H. Baltach, A. Abdiche, Y. Al-Douri, R. Khenata, S. Bin Omran, X. Wang, D. P. Rai, A. Bouhemadou, W. K. Ahmed, C. H. Voon: ***Doping-Induced Half-Metallic Ferromagnetism in Vanadium and Chromium-Doped Alkali Oxides K2O and Rb2O: Ab Initio Method***. Journal of Superconductivity and Novel Magnetism 02/2017;, DOI:10.1007/s10948-017-4021-9

16. Bedjaoui, A.; Bouhemadou, A.; Aloumi, S.; et ; **Structural, elastic, electronic and optical properties of the novel quaternary diamond-like semiconductors Cu2MgSiS4 and Cu2MgGeS4** ; SOLID STATE SCIENCES Volume: 70 Pages: 21-35 Published: AUG 2017

17. B. Amimour, M. Slimani, C. Sifi, R. Khémissi, H. Meradji, S. Ghemid, S. Bin Omran, R. Khenata: ***Computational investigations of the band structure and thermodynamic properties of calcium-doped BaS using the FP-LAPW approach***. DOI:10.1016/j.cjph.2017.02.002

18. Sandeep, D.P. Rai, A. Shankar, M.P. Ghimire, R. Khenata, S. Bin Omran, S.V. Syrotyuk, R.K. Thapa**: *Investigation of the structural, electronic and optical properties of the cubic RbMF3 perovskites (M = Be, Mg, Ca, Sr and Ba) using modified Becke-Johnson exchange potential***. DOI:10.1016/j.matchemphys.2017.02.005

19. Diana Dahliah, M. Abu-Jafar, R. Khenata, A. Mousa, Raed Jaradat, Samah Al-Qaisi, S. Bin Omran: ***Structural stabilities and band structure characteristics of Platinum Nitride (PtN) via first-principles calculations***. DOI:10.1016/j.cjph.2016.12.007

20. Samah Al-Qaisi, M.S. Abu-Jafar, G.K. Gopir, R. Ahmed, S. Bin Omran, Raed Jaradat, Diana Dahliah, R. Khenata: ***Structural, Elastic, Mechanical and Thermodynamic Properties of Terbium Oxide: First-Principles***

Investigations. Results in Physics 02/2017; 7., DOI:10.1016/j.rinp.2017.01.027

21. Diana Dahliah, M. Abu-Jafar, R. Khenata, Ahmad Mousa, Raed Jaradat, Samah Al-Qaisi, S. Bin Omran: ***Structural stabilities and band structure characteristics of platinum nitride (PtN) via first-principles calculations***. Chinese Journal of Physics- Taipei- 01/2017; 55(2):211.

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23. D. P. Rai, Sandeep, R. Khenata, R. K. Thapa, Anup Pradhan Sakhya, T. P. Sinha, Boualem Merabet, Shahram Solaymani, M. Musa Saad H.-E, Arash Boochani, A. Shankar: ***Electronic and optical properties of cubic SrHfO3 at different pressures: A first principles study***. Materials Chemistry and Physics 11/2016; 186., DOI:10.1016/j.matchemphys.2016.11.045

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25. R.K. You, Guodong Liu, Xiaotian Wang, Habib Rozale, L.Y. Wang, Rabah Khenata, Z.M. With, X.F. Dai: ***First-principles study on quaternary Heusler compounds ZrFeVZ (Z = Al, Ga, In) with large spin-flip gap***. RSC Advances 11/2016; 6(111)., DOI:10.1039/C6RA18873G

26. T. Seddik, G. Uğur, F. Soyalp, R. Khenata, Deo Prakash, I.V. Kityk, Saleem Ayez Khan, A. Bouhemadou, S. Bin-Omran, D.P. Rai, K.D. Verma: ***Computational investigations on band structure and electronic features of chromium-based carbides and nitride Cr3PX (X = C and N) through the FP-APW+LO approach***. SUPERLATTICES AND MICROSTRUCTURES Volume: 109 Pages: 1-12 Published: SEP 2017

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28. K. Hadji, A. Abdiche, F. Soyalp, S.Bin Omran, R. Khenata: ***Computational investigations on band structure and optical properties of the BeSexTe1-***

xalloys through the FP-LAPW approach. Optik - International Journal for Light and Electron Optics 11/2016;, DOI:10.1016/j.ijleo.2016.11.105

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33. Fatma Saad Saoud, Khenata Rabah, Abdelmadjid Bouhemadou, Jean Claude Plenet, Mohamed Henini, Rihabe El Houda Djabou: ***Structural Stabilities and Elastic Thermodynamic Properties of SrTe Compound and SrTe1−x Ca x Alloy Under High Pressure***. Journal of Electronic Materials 09/2016;, DOI:10.1007/s11664-016-4830-9

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Superconductivity and Novel Magnetism 08/2016;, DOI:10.1007/s10948-016-3711-z

37. S. Reguieg, R. Baghdad, A. Abdiche, M. A. Bezzerrouk, B. Benyoucef, R. Khenata, S. Bin-Omran: ***First-Principles Study of Structural, Optical, and Thermodynamic Properties of ZnIn2X4 (X = Se, Te) Compounds with DC or DF Structure***. Journal of Electronic Materials 08/2016;, DOI:10.1007/s11664-016-4831-8

38. A. Benahmed, A. Bouhemadou, R. Khenata, S. Bin-Omran: ***Ab initio study of the electronic, optical and thermodynamic properties of the ternary phosphides LiAeP (Ae = Sr, Ba),*** Indian Journal of Physics 08/2016;, DOI:10.1007/s12648-016-0909-7

39. D. P. Rai, Sandeep, M.P. Ghimire, A. Shankar, Anup Pradhan Sakhya, T. P. Sinha, R. Khenata, R. K. Thapa: ***Electronic and magnetic properties of X2YZ and XYZ Heusler compounds: a comparative study of density functional theory with different exchange-correlation potentials.*** Materials Research Express 07/2016; 3(7).

40. Fafa Chiker, Fatiha Boukabrine, H. Khachai, R. Khenata, C. Mathieu, S. Bin Omran, S. V. Syrotyuk, W. K. Ahmed, G. Murtaza: ***Investigating the Structural, Thermal, and Electronic Properties of the Zircon-Type ZrSiO4, ZrGeO4 and HfSiO4 Compounds***. Journal of Electronic Materials 07/2016; 45(11)., DOI:10.1007/s11664-016-4767-z

41. Wilayat Khan, G. Murtaza, T. Ouahrani, Asif Mahmood, R. Khenata, Mohammed El Amine Monir, H. Baltache: ***Electronic, bonding, linear and non-linear optical properties of novel Li2Ga2GeS6 compound***. Journal of Alloys and Compounds 07/2016; 674., DOI:10.1016/j.jallcom.2016.02.213

42. O. Boudrifa, A. Bouhemadou, Ş. Uğur, R. Khenata, S. Bin-Omran, Y. Al-Douri: ***Structural, electronic, optical and elastic properties of the complex K 2 PtCl 6 -structure hydrides A RuH 6 (A = Mg, Ca, Sr and Ba): first-principles study***. Philosophical Magazine 06/2016; 96(22), DOI:10.1080/14786435.2016.1198874

43. Sandeep, D P Rai, A Shankar, M P Ghimire, Anup Pradhan Sakhya, T P Sinha, R Khenata, S Bin Omran, R K Thapa: ***Band-gap engineering of La1−NdAlO3 (= 0,0.25,0.50,0.75,1) perovskite using density functional theory: A modified Becke Johnson potential study***. Chinese Physics B 06/2016; 25(6)., DOI:10.1088/1674-1056/25/6/067101

44. A. Shankar, D. P. Rai, Sandeep, R. Khenata, M. P. Ghimire, R. K. Thapa: ***FP-LAPW study of energy bands and optical properties of the filled skutterudite $$\hbox {CeRu}_{4}\hbox {As}_{12}$$ CeRu 4 As 12 with***

spin–orbit coupling. Journal of Computational Electronics 05/2016; 15(3)., DOI:10.1007/s10825-016-0836-z

45. M. Faizan, S. H. Khan, G. Murtaza, A. Khan, R. Khenata, Asif Mahmood, S. Hussain, M. A. Ali: ***Structural, elastic, electronic and magnetic properties of Ba2XOsO6 (X = Li, Na, Ca) double perovskites***. Indian Journal of Physics 05/2016; 90(11)., DOI:10.1007/s12648-016-0872-3

46. A. S. Ibraheam, Y. Al-Douri, U. Hashim, M. Ameri, A. Bouhemadou, R. Khenata: ***Structural, optical and electrical investigations of Cu2Zn1-xCdxSnS4/Si quinternary alloy nanostructures synthesized by spin coating technique.*** Microsystem Technologies 05/2016;, DOI:10.1007/s00542-016-2986-0

47. Samad Iqbal, G. Murtaza, R. Khenata, Asif Mahmood, Abdullah Yar, M. Muzammil, Matiullah Khan: ***Electronic and Optical Properties of Ca3MN (M = Ge, Sn, Pb, P, As, Sb and Bi) Antiperovskite Compounds***. Journal of Electronic Materials 05/2016; 45(8)., DOI:10.1007/s11664-016-4563-9

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54. M. CAID, H. RACHED, D. RACHED, R. KHENATA, S. BIN OMRAN, D. VASHNEY, B. ABIDRI, N. BENKHETTOU, A. CHAHED, O. BENHELLAL: ***Electronic structure and optical properties of (BeTe)n/(ZnSe)m superlattices***. MATERIALS SCIENCE-POLAND 04/2016; 34(1)., DOI:10.1515/msp-2016-0004

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57. Sikander Azam, Saleem Ayaz Khan, Haleem Ud Din, Rabah Khenata, Souraya Goumri-Said: ***Exploring the thermoelectric and magnetic properties of uranium selenides: Tl2Ag2USe4 and Tl3Cu4USe6***. Journal of Magnetism and Magnetic Materials 03/2016; 413., DOI:10.1016/j.jmmm.2016.03.0733

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5. 2- CHAPTER IN BOOKS:

Advances in Condensed Matter Physics; Ed. By Ali Hussain Reshak, Signpost - India (2008).

Chapter 6: High pressure structural (B1-B2) phase transition and elastic properties of thorium chalcogenides and pnictides.

A. Aid , R. Khenata , A Bouhemadou ,T. Seddik , A. H. Reshak

Chapter 4: Calculated structural and elastic properties of M_2GeC (M = Ti, V, Cr, Zr, Nb, Mo, Hf, Ta, W)

A. Bouhemadou, R. Khenata, M. Chegaar, A. H. Reshak

B.

5.3-CONFERENCES:

5.3.1: NATIONAL

- **4th National Days in Physics and its Application CNPA'2000. 21-23 November 2000. Sidi-Fredj, Algeria**;''Linearized augmented plane wave calculation of the electronic structure and total energy of Tungsten'',R. Khenata, B. Baltache, H. Aourag

- **4th National Days in Physics and its Application CNPA'2000. 21-23 November 2000. Sidi-Fredj, Algeria**.''Electronic structure of PbSe and PbTe band structure and densities of states''.H. Baltache, M. Sahnoun, R. Khenata, H. Aourag

- **4th National Days in Physics and its Application CNPA'2000. 21-23 November 2000. Sidi-Fredj, Algeria**."Electronic charge densities in PbS and PbTe ". M. Sahnoun , R. Khenata, H. Baltache, H. Aourag

- **5th Days on Chemical Theory –Mostaganem-Algeria 5 – 7 Mai 2001**. "Electronic properties of bcc, fcc, and hcp Cr crystal"; "Electronic structures and optical properties of ZnO", M. Sahnoun, R. Khenata

- **5th Days on Chemical theory –Mostaganem-Algeria 5 – 7 Mai 2001**."Local-density and generalized-gradient calculations of the structural properties; of semiconductors", "Structural and electronic properties of SrX(X=S,Se,Te) R. Khenata , M. Sahnoun , H. Baltache

- **5th Days on Chemical theory –Mostaganem-Algeria 5 – 7 Mai 2001.** "Electronic and optical properties of boron compounds BaS, and BSb" H. Baltache, R. Khenata

- **1st congress on the Physic and its Applications (JPA-01),16-18 Mai 2004, Tiaret University (Algeria)**."Trends in band gap pressure coefficients in IV-IV compound" R. Khenata, H. Baltache, M. Rérat.

- **1st Congress on Physic and its Application (JPA-01),16-18 Mai 2004, Tiaret University (Algeria**)."ab initio calculations of structural, electronic and elastic properties of CaO, SrO and MgO". H. Baltache, R. Khenata A. Maachou, A. Aid.

- **Mascara Numerical Simulation Days (JSNM-06-25-27 Mars 2006),'**"Effect of pressure on electronic and optical properties of PbTiO2 and PbZrO3"H. Baltache, R. Khenata, A. Bouhemadou, M. Rérat.

- **Mascara Numerical Simulation Days (JSNM-06-25-27 Mars 2006**)"Structural phase stability and elastic properties of lanthanummonochelcogenides at high pressure"A. Bouhemadou, R. Khenata, B. Bennecer.

- **Mascara Numerical Simulation days - Mascara (JSNM-06-25-27 Mars 2006)**"Structural phase transformation and elastic constants of barium chalcogenides at high pressure" A. Bouhemmadou, R. Khenata, F.Zegrar, A. H. Reskak.

5.3.2: INTERNATIONAL

- **International Conference on Materials Science and Applications Development and Innovation. Taif University - Saudi Arabia.** Theoretical study of structural, electronic, elastic and vibrational properties of

quaternary Heusler type CuCoMnG. Gökay Uğur, Abdelmadjid Bouhemadou, Şule Uğur, Abdullah Candan, Fethi Soyalp & Rabah Khenata.

- **International Conference on Materials Science and Applications Development and Innovation. Taif University - Saudi Arabia.** First-principles investigation on the elastic, magnetic, electronic and phonon properties of NiFeMnGa andNiCoMnGa half-metallic alloys. Şule Uğur, Rabah Khenata, Gökay Uğur, Ahmet İyigör, Fethi Soyalp & , Abdelmadjid Bouhemadou,

- **International Conference on Materials Science and Applications Development and Innovation. Taif University - Saudi Arabia.** Ab initio structural, electronic, elastic and phonon calculations for B2 NiAl and NiGa. Fethi Soyalp, Gökay Uğur, Şule Uğur, Rabah Khenata & Abdelmadjid Bouhemadou,

- **Fifth Saudi Conference (SSC'5-2012)-Oum El Qurra University-Mekka 2012- Saudi Arabia** "Elastic, electronic and thermodynamic properties of $KZnF_3$ via first-principles" . R. Khenata, A. Bouhemadou, S. Bin Omran, T. Seddik.

- **First International Conference on Innovative Materials and Techniques-GIMT-2012-Tunisia, 2012**. "Calculation of structural, elastic magnetic and electronic properties of ferromagnetic CmP under pressure"; H. Baltache, A. Bendjdid, R. Khenata, T.Ouahrani, D. Rached.

- **6th Morocco Days on Materials Science. 9-11 November 1998. Annaba University-Algeria,**''Spin-orbit splittings of II-VI and III-V semiconductor bands at Γ, L and X''. R. Khenata, B. Belgoumene, M. Driz, H. Aourag.

- **International Congress on Materials Science and Engenniring.27-30 November 1999. University-U.S.T.H.B- Algeria**.''Empirical pseudo-potential calculations of ternary semimagnetic semiconductors Cd Mn Te''.R. Khenata, B. Belgoumene, H. Khachai, S. Brahou.

- **International Congress on Materials Science and Engenniring.27-30 November 1999**. **University-U.S.T.H.B- Algeria**.''The modification of the spin-orbit interaction in the zinc-blende binary II-VI and III-V Semiconductors''.R. Khenata, B. Belgoumene, M. Driz, H. Khachai, S. Brahou.

- **International Congress on Materials Science and Engenniring.27-30 November 1999. University-U.S.T.H.B- Algeria**.''The model dielectric function for semiconductors'' H. Baltache, R. Khenata, M. Driz.

- **Maghreb Conferences in engineering Sciences- CMGE'99.4-6 December1999. Constantine University** ''Band structure study of ternary diluted magnetic semiconductor ZnMnTe''.R. Khenata, H. Baltache, M. Sahnoun, B. Belgoumene, M. Driz

- **The International Conferences in Materials Science,3-5 April 2000, M'sila- University-Algeria**.''The calculation of the static dielectric function and the plasmon energy''H. Baltache, R. Khenata, M. Driz, H. Aourag

- **5th International Day on Marine Sciences, J'NESMA2001, Mai2001, Borg-el Bahi, Temenfost, Alger-Algeria**.'' Infrared Rayon and useful in electronic applications''R. Khenata, M. Sahnoun, H. Baltache

- **5th International Workshop on Computational Condensed Matter Physics: Total energy and force methods.11-13 January 2001**. Trieste, Italie.''Full-LAPW Calculations of electronic structure of beryllium chalcogenides of BeS, BeSe and BeTe'' R. Khenata, M. Sahnoun, H. Baltache, H. Aourag

- **5th International Workshop on Computational Condensed Matter Physics :Total energy and force methods.11-13 January 2001**. Trieste, Italie. ''Full-Potential LAPW study of MgO using different exchange-correlation functionals''.M. Sahnoun , R. Khenata, H. Baltache, B. Bouhafs, M. Driz, H. Aourag

- **International Conference in Materials Science, Tlemcen-University-Algeria, November-2003**.‘’Structural phase transformation and equation of states of Strontium chalcogenides at high pressure”. R. Khenata, H. Baltache, M. Driz, B. Abbar.

- **International Conference on Electrical Engineering, Communication & Physical Systems. Saida University- Algeria**- Mai -2004. ‘’First principle calculation of optical properties of GeC, SnC and GeSn under hydrostatic pressure”.M. Driz, R. Khenata, M. Sahnoun, M. Rérat.

- **Scientific Days- Franco-Algerian - Ourgla – University-November-2004**.‘’ FP-LAPW calculations of grounds states properties for the cubic zinc-blende-like AlN, GaN and InN compounds”.B. Daoudi, R. Khenata, O. Boukraa, H. Abid

- **Scientific Days- Franco-Algerian - Ourgla – University-November-2004**.‘’ Ab initio study of the phase transformations under high pressure and elastic properties of cerium chalcogenides”.Bouhamadou, R. Khenata, M. Kharoubi.

- **4th International Congress in Materials Sciences -2-4 Mai 2006 : Tlemcen-University - Algeria**.‘’First principle study of optical properties of MgAl2O4 and ZnAl2O4 compounds” R. Kheneta, H. Baltache, B. Bouhafs, B. Bouhemadou, M. Rérat.

- **5th International Congress on Materials Science and Engineering CISGM-5-22-24- Novemeber-2008-Gulma** University-Algeria “Electronic band structure and optical properties of ZnIn2Te4 with FP-LAPW approach” Y. Ayeb, R. Arrar. M. Halit, M. Hachemaoui, R. Kheneta

- **5th International Congress on Materials Science and Engineering CISGM-5-22-24- Novemeber-2008-Gulma University-Algeria**“First principle study f electronic and optical properties of alkali metal oxides under pressure effects” R. Khenata, M.Moakafi, A.Bouhemadou, M.Hachemaoui, H. Khachai

- **6th International Conferences on the Materials Science(CSM6), Beirut-Lebanon(2008)**." Structural , Electronic and optical propertsie of X2S compounds","Theoretical Study of the mechanical and electronic properties of some spinel compounds""FP calculations of high pressure properties of ThX (X=S,Se and Te)"R. Khenata, A.Bouhemadou and H. Balatche

- **10th International Conferences on the Materials Science(CIPMCPS), Beni Mellal- Morocco.25-26 Mars-2010** "Fist- principle study of eleatsic, electronic and optical properties of some spinel compounds".

- **10th International Conferences on the Materials Science(CIPMCPS), Beni Mellal- Morocco.25-26 Mars-2010** "Structural phase transformation and elastic properties of GdN" H. Baltache and R. Khenata

5.3.3. INVITED PLENARY CONFERENCE:

Plinary conference titled: **First principle studies of the mechanical, electronic and optical properties of some spinel sulphides under pressure effects**". Department of Physics and Astronomy- King Saud university- Saudi Arabia- March 2012.

6. RESEARCH AND PROJECTS:

I was president (of) and member (in) more than 12 projects in different fields (Physics, Mechanics). Eight of them are completed.

- I was member in more than 10 CNEPRU Projects: Algérien CNEPRU projects : **N° D01220060041 (2007) ; N° D01220080007 (2009) ; N° D01220090033 (2010) ; N° E03720090011(2010) ; N° D02120100026 (2011) ;…..**
- I was responsible (Chief) of the CNEPRU Project number **D03720060004** (for three years starting from January 2006)
- I was member in one PNR project number: In fundamental Sciences.

7- RESEARCH SUPERVISION:

7-1: TWELVE MAGITER THESIS COMPLTED

- 1. Hichour Malika, Mascara University
- 2. Sedik Tayeb, Mascara University
- 3. Missoun Adda, Mascara University
- 4. Djiad Abdelhamid, Mascara University
- 5. Ougad Sofiane, Mascara University

- 6. Boubker Nacéra, Mascara University
- 7. Moutassem Mohamed, Mascara University
- 8. Bendjedid Aicha, Mascara University
- 9. Zerrouki Tayeb, Mascara University
- 10. Meziane Ouda, Mascara University
- 11. Amriche Oumria, Mascara University
- 12 Belkacemi benyamina, Mascara University

7-2: FOURTEEN (14) DOCTORATE (PHD) THESIS COMPLTED

1- Moakafi Mohamed

Title : Contribution à l'étude des propriétés structurales, électroniques et optiques sous l'effet de pression des oxydes alcalin: X_2O (X=Li, Na, K, Rb) par la méthode FP-LAPW

Date of presentation: March 2010 at Sidi Bel-Abbès university.

2- Hichour Malika

Title: Etude des propriétés structurales, élastiques, électroniques et optiques des antipérovskites $ANSr_3$ (A=AS, Sb et Bi).

Date of presentation: May 2010 at Sidi Bel-Abbès University.

3- Benalia Salah Eddine

Title: Etude des propriétés structurales, électroniques et optiques des Skutterudites remplis $CeTr_4P_{12}$ (Tr=Fe, Ru et Os) par la méthode FP-LMTO. **Date of presentation: November 2009** at Sidi Bel-Abbès university.

4- Ayeb Yakob

Title: Etude des propriétés structurales, électroniques et optiques du $ZnIn_2Te_4$ chalcopyrites

Date of presentation: June 2012 at Sidi Bel-Abbès University.

5- Ouahrani Tarik

Title: Calcul des propriétés structurales, thermiques et optiques des composées chacopyrites par la méthode FP-(L)APW.

Date of presentation: February 2011, at Abou Bekr Belkaid University - Tlemcen.

6- Hachemaoui Malika

Title: Etude de l'effet de pression sur des propriétés structurales, élastiques électroniques et optiques des matériaux de type skutturidites par la méthode FP-LAPW : Cas du XFe4Y12 (X=La, Ce; Y=P, As, Sb).

Date of presentation: June 2012 at Sidi Bel-Abbès university

7- Seddik Tayeb

Title: Contribution à l'étude des propriétés structurales, élastiques, optoélectroniques et thermodynamiques des matériaux à base de (K,Y et Lu).

Date of presentation: Aprial 2013 at Sidi Bel-Abbès University

8- <u>Semari Fatiha</u>

Title: Contribution à l'étude des propriétés mécaniques, optoélectroniques et thermophysiques des matériaux de type $X^{II}Y^{III}_2Z_4$ et $X^{IV}Y^{II}_2Z_4$ (Z=O,S et Se) par la méthode FP-LPAW**.**

Date of presentation: Jully 2013 at Sidi Bel-Abbès University

9- Djied Abdelhamid

Title: Contribution à l'étude des propriétés structurales, mécaniques et optoélectroniques des composés ternaires à base sodium NaZnX (X=P, As et Sb) par la méthode (FP-LAPW).

Date of presentation: Juin 2014 at Sidi Bel-Abbès University

10- Ould Kada Mokhtaria

Title: Contribution à l'étude des propriétés structurales, électroniques et thermodynamiques des matériaux à base de (Rh et de Ce) par la méthode FP-LAPW.

Date of presentation: Juin 2014 at Sidi Bel-Abbès University

11- Mekkaoui Fatiha

Title: Etudes des propriétés structurales, élastiques et électroniques des pérovskites cubic $RBRh_3$(R=Sm, Eu, Gd et Tb)

Date of presentation: Juin 2014 at Sidi Bel-Abbès University

12- Missoum Adda

Title: Contribution à l'étude des propriétés mécaniques, optoélectroniques et thermodynamiques des alliages Heusler à base de (Al, Ga, Sb et Sn) par la méthode des ondes planes linéairement augmentées

Date of presentation: Aprial 2015 at Sidi Bel-Abbès University

13- Djaafri Tayeb

Title: Full potential calculations of the elastic, magnetic and thermodynamic properties of some metal Heusler alloys

Date of presentation: Aprial 2015 at Sidi Bel-Abbès University

14- Arar Rabie

Title: Etude par la méthode du premier principe des propriétés, structurale, électronique et thermodynamiques de quelques composés ternaires à base de fluor.

Expected Date of presentation: June 2015 at Sidi Bel-Abbès University

7.3. TEACHING EXPEREINCE:

Twenty two years (22) of teaching

7.4. SEMINAIR ORGANIZATION:

- President of the Scientific and organization committies of « Mascara International Numerical Simulation Days" (JSNM1) 25-27 Aprial-2006-Mascara».
- Member in the Scientific and organization committies for more than 15 scientific manifestations

8- MEMBER OF THE EDITORIAL BOARDS

- ***Editor: International Journal of Nanoelectronics and Materials (IJNEAM).***

http://www.myjurnal.my/public/browse-journal- view.php?id=219

- ***Editorial broad:*** **International Journal of Nano Science and Technology; ISSN: 2328- 5443.**

http://www.ijnst.com/Editorial%20Board.php

- ***Editorial broad: Biointerface Research in Applied Chemistry, Open Access Journal (ISSN: 2069-5837)***

http://biointerfaceresearch.com/?page_id=87

Referee in More than 20 Journals (Elsevier, IOP, Springer and ACS)

- Referee of the "Computational Materials Science", Publisher "*Elsevier*".
- Referee of the "*Journal of Alloys and Compounds*", Publisher "*Elsevier*".
- Referee of the Journal Phys. Chem. B. (ASC).
- Referee of the "*Physica B*", Publisher "*Elsevier*".
- Referee of the "*Journal of Molecular Structure*", Publisher "*Elsevier*".
- Referee of the " Solid State Communications", Publisher "*Elsevier*".
- Referee of the journal of "*Physica Status Solidi b*", Publisher "*Wiley*".
- Referee of the journal of "*Physics Letters A*", Publisher "*Elsevier*".
- Referee of the journal of "*Physics Research International*", Publisher "Springer".
- Referee of the journal of "European Physical Journal B", Publisher "Springer".
- Referee of the journal of "Phylosophical magazine", Publisher "Springer".
- Referee of the journal of "Materials Sciences", Publisher "Springer"
- Referee of the journal of "Journal of Applied Physics", Publisher "ACS"

9. SCIENTIFIC AND PEDAGOGIC RESPONSABILITIES:

9.1. SCIENTIFIC

- Responsible (DOMAIN) for field training LMD "Science and Technology" from April 2010 to date "Two contracts", Ministerial Decision, October 2010
- Head of "Semiconductor and numerical simulation" team in the Laboratory of Quantum Physics and Mathematical Modeling of the Material (LPQ3M).
- Head of LPQ3M-Laboratory. Ministerial Decision, Febr. 2014
- Member in the National Scientific Comity for the Evaluation of National and International Journals of Physics in Algeria. Ministerial Decision, Jully 2014
- Mumber in National Commity of university for evaluating the associate professors for promotion to full professor rank (CUN).
- Founding Member of Academy of Science and Technology in Algeria, Presidential Decree number 49 of au 16 sept. 2015.

9.2. PEDAGOGIC

- Respensible on the Magister formation titled " Physics of nanomaterials" Ministerial Decision, 26 Aout 2006.

- Local coordinator of the Doctoral school in physics titled "Physics and Chemistry of Materials " Ministerial Decisions, N° 224 and 225 Jully 2009 and N° 257 du Juillet 2010

10. HONOURS AND AWARDS

- National Award : President of the Algerian republic- Laghouat University , Novmeber 2011

- International Award: Scopus award –November 2013.

11. SCIENTIFIC VISITS

1. Invitation from Prof. Gerard Vorgoten- Department of Physics-Chemical laboratory-Lille University-France (2003 for one month).

2. Invitation from Prof. Michel Rérat- Physical Chemistry Group (IPREM-UMR) - Pau University- France.(2004;2005,2007; 2008 for one month in each year).
3. Invitation from Prof. Claude Daul - Physics Department- Fribourg University-Suisse(2006 for one month)
4. Invitation from Prof. Claude Demengeat- Institute of Physical and Chemistry of Materials of Strasbourg (IPCMS) Strasbourg University- France (2007 for one month).
5. Invitation from Prof. Fouad El Haj Hassan- Physics Department-El Hadeth University Beirut–Lebanon (2009for one month)
6. Invitation from Prof. Fethi Soyal and Gokay Ugur (Ghazi university- Turkey)
7. Invitation from Prof. AbdelAziz Zugbi- Physics Department- DAMAS- University- Syria (2009 for one month)
8. Inviatation from Prof. A. Munoz, Terinife-Spain (2013 for one month) Inviataion from prof. Dinesh Varshney- Devi Ahiliya University-India (2014 for one month)