**Curriculum Vitae**

**Personal status**

****Name: Burhan Rashid Nori Al Shafaay

Date and Place of Birth: 21/04/1966 Babylon-Iraq

Citizenship: Iraqi

Marital status: Married

**Personal Address*:*** Kerbala- Iraq

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**Academic References**

1- Prof. Fouad El Haj Hassan, head of the condensed matter laboratory in faculty of Sciences (I) at the Lebanese University. Tel. number: 00 961 5 460494, Fax: 00 961 5 461496, E-mail: [hassan.f@ul.edu.lb](mailto:hassan.f@ul.edu.lb)

2- Prof. Mahmoud El Korek, Work Experience 9/1979−up till now: Concordia University, Canada. American, University of Beirut, Beirut, Lebanon. Lebanese’s University, Lebanon. Beirut Arab University, Beirut, Lebanon. Tel. number: +961 1 737170, +961 3 747617

E-mail:[Mahmoud.korek@bau.edu.lb](mailto:Mahmoud.korek@bau.edu.lb)

**Academic Rank**: Assistant professor

**Language**: Arabic and English

**Qualifications**

-November 1989: BSc. in Physics (Al Mustaniriyah University)/Baghdad- Iraq.

- January 2002: MSc. (Baghdad University)/ Baghdad- Iraq.

- June 2014: PhD thesis in materials sciences and molecule (Beirut Arab University (BAU) Lebanon).

**Thesis: « Theoretical Studies of the Fundamental Properties of Hg Chalcogenides HgX (X = S, Se, Te) and Their Alloys »**

**-Accurate Specialist of PhD.** Materials and Molecular

**Computational methods**

1. In our research, we use the program package WIEN2k which allows 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.

2. We use also a PWscf (Plane-Wave Self-Consistent Field) program package which is a set of programs for electronic structure calculations within Density-Functional Theory and Density-Functional Perturbation Theory, using a Plane-Wave basis set and pseudopotentials.

**Teaching experiences**

Mechanics 1st year Physics

Electricity and Magnetism 1nd year Physics

Materials 2nd year Physics

Physics 1st year Biology

Calculus 1st year Mathematic

**Publications and Conferences**

1) - “**Nonconventional electromagnetic lens”, B. Al Shafaay and Al saadi.** Second Scientific Conference of Kerbala University 2006.

2) - “**Study the effect of temperature and frequency on some dielectric constant properties for wood of palm tree**”, **B. Al Shafaay.** Journal of Kerbala University Vo.5 No.1, 2007

3) - “**Study some dielectric properties for wood of the tree of olive**”, **B. Al Shafaay.** Journal of Kerbala University Vo.5 No.2, 2007

4) – “**Study dielectric constant of mineral clay type Attabullgite**”, **B. Al Shafaay,** Abbas Matrood and Haider Hameed. Journal of Kerbala University Vo.5 No.4, 2007

5) – “**Study physical and chemical properties of some kinds of local and imported honeys**”, **B. Al shafaay, Luma Ahmed and Zena Mohamad.** Journal of Al- Qadisiya/pure sciences Vol.12, No.4, 2008

6) - **“Preparation of Anorthite Ceramics from Local Raw Materials**” **B. Al shafaay**,Fadhil A. Rasin and Muamar Abdu Al-Aziz. The Second Conference of Karbala University 2008**.**

7) – “**Study effect of annealing on forbidden energy gap and optical constants for ZnS thin film prepared by thermal chemistry analysis**”, **B. Al Shafaay,** Ali Sadam and Falah Hassan. Journal of Kerbala University 2009

8) – “**Studying the effect of doping and radiation on optical properties of ZnS thin films prepared by chemical spray pyrolysis**”, **B. Al Shafaay.** JOURNAL OF KUFA – PHYSICS Vol.2, No.1 (2010).

9) – “***Ab initio* Study of the fundamental properties of HgSe, HgTe and their HgSexTe1-x alloys**” **B. Al Safaay,**

F. El Haj Hassan**,** S Ghemid, H Belkhir and M. Korek. J. Phys. Scr. 84 (2011) 065601 (7pp).

10) - “**Preparation of Organometallic Compounds from Schiff Bases and Study their Thermal Properties as a Function of Temperatures**” Abdul-Aziz O. Musa Mohammed, H. Abbas, and **B. Al Shafaay**. Journal of Babylon University/Pure and Applied Sciences/ No. (1)/ Vol. (22): 2012 College of Science/Babylon University Scientific Conference.

11) – “**Electronic structure of a metal compounds**.” **B. Al Shafaay**, Fouad El hajj Hassan and Mahmoud El Korek. The 18th International Conference of the Lebanese association for the Advancement of Science Beirut – Lebanon, March 24, 2012.

12) - “**First principle investigation of mercury chalcogenides and their HgSxSe1-x and HgSxTe1-x ternary alloys” B. Al Shafaay**, F. El Haj Hassan and M. Korek. J. Computational Materials Science 83 (2014) 107–113.

13) - “**Study of Radon and Radium Concentration in Water Samples in Some Regions of Lebanon”** Abdalsattar K. Hashim, **B. Al Safaay** and Fadhil K. Fulyful. Journal of Kerbala University, Vol. 12 No.2 Scientific, 2014.

14) **– “Determination of Uranium Concentration, Radium Content and Radon Exhalations Rates in Soil Samples for some Regions in Lebanon” B. Al Shafaay,** Abdalsattar K. Hashim and Fadhil K. Fulyful. J. Al-Kufa Journal of Physics. Vol.8 ,No.1, 2014.

15) - “**Structural, electronic, mechanical and thermodynamic properties of CdS compound” B. Al Shafaay,** J. Chem. Bio. Phy. Sci. Sec. C, Aus. 2014 – Oct. 2014; Vol.4, No.4; 0000-0000.

16) - “**Density functional study of TiN compound:mechanical and thermal properties” B. Al Shafaay,** Salman Mahmoud, A. M. Al Saeedi and F. El Haj Hassan. *IPASJ International Journal of Information Technology (IIJIT)*,Volume 2, Issue 9, September 2014.

17) - Medgreen 2011-LB Conference. Lebanese university 2011

18) -MIC Micro Electron International Conference, Lebanon Crown Plaza Hotel 2014.