



## Abbas Fadhel Essa

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<https://scholar.google.com/citations?user=yn5YzgIAAAAJ&hl=ar>



### Academic Qualifications

**1996 – 2001**

**Ph.D.**

Department of Physics  
Baghdad University, College of Science

**Doctoral Thesis:** "Peel Strength and Topography of Polymers – Metal Adherents Systems "

**1988 – 1990**

**Master of Science**

Department of applied science  
Technology University

**Master's Thesis:** "Calculation and measurement of nuclear fission products and their distributions in natural ceramic nuclear fuels"

**1983 - 1987**

**Bachelor science**

Majors: Physics Science  
College of Education

**Bachelors project :** " The influence lasers on the smolder environment"  
Mosul University.

### Scholarships and Awards

**10/2019**

Certificate of appreciation in the Science and Technology held by Baghdad College of University Science, **Egypt**

**2/2019**

College of Science shield Award, **Kut University College**

**2/2014**

Research awarding to develop staff to the University of Dundee ,**United Kingdom**

**4/2013**

College of Science shield Award, **Wasit University**

**3/2012**

Certificate of appreciation in Recent Trend in physics, **AL- Qadisiya University**

**5/2010**

Certificate of appreciation in the Science and Technology held by

PHYWE Systems, **Sulaimani University**

### Positions

**1992 – 1996**

Determinant of the production metals department

**2001 – 2003**

Computer Center Manager at the university

**2003 – 2004**

Dean of the College of science at the university of wasit

**2005 – 2006**

Manger of Cultural relations at the university of wasit

**2008 – 2016**

Head of the physics department at the College of science.

## Academic Employment

- 12/1991 – 01/2001** Employed an **assistant lecture** in the Metals Department / Technical Institute in Kut / Ministry of Higher Education and Scientific Research.
- 3/2001 – 3/2002** Worked an **lecture** in Physics Department /College of science/Wasit University.
- 4/2005** Promoted to the **assistant professor** in Physics Department /College of science/Wasit University.
- 9/2014** Promoted to the **professor** in Physics Department /College of science/Wasit University.

## Teaching

### **I – Postgraduate:**

- Master of general physics: Solid state physics and Quantum mechanics
- Ph.D. of general physics : Solid state physics and Materials physics
- Supervisor for Master and Ph.D. students

### **II – Undergraduate:**

- Materials properties / 1<sup>st</sup> stage / Metals Dep.
- Metals / 2<sup>nd</sup> stage / Metals Dep.
- Mechanics / 1<sup>st</sup> stage / Physics Dep.
- Electricity and Magnetism / 1<sup>st</sup> stage / Physics Dep.
- Materials Physics / 2<sup>nd</sup> stage / Physics Dep.
- Quantum Mechanics / 3<sup>rd</sup> stage / Physics Dep.
- Thin Films / 3<sup>rd</sup> stage / Physics Dep.
- Solid state physics / 4<sup>th</sup> stage / Physics Dep.
- Supervisor of researcher for 4<sup>th</sup> stage physics student.
- Basic Language ( computer ) / 1<sup>st</sup> stage for different department.
- Radiation Therapy Physics / 4<sup>th</sup> stage / Physics Dep.

## Publications

- 1- Hind Mohammed Khudair, Abbas Fadhel Essa "Structural Properties of prepared Polyaniline/ Silver Nanocomposite", *AIP Conf. Proc.* 2922, 210005 (2024) .
- 2- Ibrahim A. Abdul-Hassan , Abbas F. Essa and Nahida J. Hameed "Study of the Effect of Multi-Walled Carbon Nanotubes on the Mechanical Properties of Poly(Vinyl Alcohol)/Polyaniline Blend Film", *International Journal of Nanoscience* (2023) 2350082.
- 3- Abbas Fadhel Essa , Noor Sabeeh Jouda "Preparation and Study of the Physical and Mechanical Properties for Hydroxyapatite-Titanium and Zirconia Nanoparticle", *AIP Conference Proceedings* 2394, 090025 (2022)
- 4- Moayad Abdullah Mohammed , Mohammed Ali Jaber , Abbas Fadel Essa AlMaamouri " Study and Evaluation of Rock Wool Board by using PVA/PU as a Polymer Blend Binder", *Iraqi Journal of Science*, 2022, Vol. 63, No. 10, pp: 4282-4291 DOI: 10.24996/ij.s.2022.63.10.15 .
- 5- Hind Mohammed Khudair, Abbas Fadhel Essa "Preparation of Polyaniline / Silver Nanocomposit and study of Optical and Structural properties", *NEUROQUANTOLOGY* | AUGUST 2022 | VOLUME 20 | ISSUE 10 | PAGE 6175-6185| DOI: 10.14704/NQ.2022.20.10.NQ55614.
- 6- Abbas Fadhel Essa , Noor Sabeeh Jouda "Preparation and Study of the Structural Properties of the Hydroxyapatite – Titania and Zirconia Nanostructures System", *AIP Conference Proceedings* 2450, 020004 (2022).
- 7- Abbas Fadhel Essa , Noor Sabeeh Jouda "Preparation and study of the structural, physical and mechanical properties of hydroxyapatite nanocomposite", *Materials Today : Proceedings*, 2021.
- 8- Moayad Abdullah Mohommed, Mohammed Ali Jaber, Abass Fadal AL mahammory "Study and Evaluation of Fiber Cement Board Using Waste Basalt Fibers in with Polyvinyl Acetate and Poly Urethane", *International Journal of Mechanical Engineering*, Vol. 7 No. 1 January, 2022.
- 9- Reem Hussein Abdullah , Abbas Fadhel Essa "Measuring the peeling strength between polymers (low density polyethylene, ethylene propylene diene monomer (EPDM) rubber) and brass and evaluating the effect of thermal and chemical oxidation on the Metal", *Materials Today : Proceedings*, 2021.
- 10- Najlaa Jerjack Abdullah1, , Salma Mhammed Hasan , Abbas Fadhel Essa "D.C. Electrical Conductivity of Polyaniline/ Graphene Nanocomposites Produced by In Situ Polymerization", *AIP Conference Proceedings* 2372, 130016 (2021).
- 11- Abbas F. Essa , Saja A. Said, Ghazi K. Saeed " A Study of Preparing Samples of Hydroxyapatite with Different Densities Using Charcoal Powder" , *Journal of Physics: Conference Series*. 2021.
- 12- Ali S. Shawai , Abbas F. Essa " *Preparation and study of the structural and optical properties for polyaniline/ Cu Nano composite*" *Materials Today : Proceedings*, 2021.
- 13- Saddam A. Resan a, Abbas F. Essa " *Preparation and study of the optical properties for polyaniline-Al<sub>2</sub>O<sub>3</sub> Nano composite*" *Materials Today : Proceedings*, 2021.
- 14- Najlaa J. Abdullah, Abbas F. Essa, Salma M. Hasan " *Optical and Structural Properties of Prepared Polyaniline – Graphene (PANI/GN) Nano composite*" *Iraqi Journal of Science* 62 (1), 2021.
- 15- Asad H. Humaich, Abbas F. Essa, Abbas S. Edan " *Fire Resistance of Selected Construction Materials*" *AIP Conference Proceedings* 2213, 020008, 2020.
- 16- Abbas S. Edan, Abbas F. Essa, Asad H. Humaich " *Fires Accidents and its Implication on Mechanical and Structural Properties of Different Construction Materials*" *Conference on science and Technology (STEPS 2020 )*, UK.
- 17- Abbas F. Essa , Saja A. Said, Ghazi K. Saeed " *Preparation and characterization of hydroxyapatite powder and study of hydroxyapatite alumina composite*" *Journal of Physics*, IOP, 2020.

- 18- Abbas F. Essa, Najlaa J. Abdullah , Salma M. Hasan "***D.C Electrical Conductivity of Polyaniline /Graphene Nano composite produced by in situ Polymerization***" Physical Science and Advanced Materials" PAM2020.
- 19- Mohammed F. Majed, Abbas F. Essa, Shatha S.Baters "***STRUCTURAL PROPERTIES OF HA:AL2O3:SiO2 GLASS CERAMICS SYSTEMS FOR BIO APPLICATIONS***" International Journal of Civil Engineering and Technology (IJCIET)Volume 10, Issue 05, May 2019.
- 20- Mohammed F. Majed, Abbas F. Essa, Shatha S.Baters "***EFFECT OF COMPOSITION RATIO AND SINTERING PROCESS ON MECHANICAL PROPERTIES AND STRESSES IN HA:Al2O3:SiO2 CERAMIC SYSTEMS***" JP Journal of Heat and Mass Transfer, 2019.
- 21- Ali A. Fayyadh1, Abbas F. Essa, S. Batros and Zinah S. Shallal "***Studying the Crystal Structure, Topography, and Anti-bacterial of a Novel Titania (TiO2 NPs) Prepared by a Sol-gel Manner***" Baghdad Science Journal, Vol.16(4) 2019.
- 22- Abbas F. Essa, Hawraa A. Alradha, Mohammed A. Jabir "***Study and evaluation mechanical properties of IPN's TDI and polyols with unsaturated polyester resins***"Iraqi Journal of Polymers 23 (1), 2019.
- 23- Abbas F. Essa, Zahraa R. "***Preparation and study the physical properties of PbI2 by using thermal evaporation to use in nuclear detector***"Indian Journal of Natural Science,2018.
- 24- Ali A. Fayyadh1, Abbas F. Essa, S. Batros and Zinah S. Shallal "***Study the Crystal Structure, Surface Morphology and Antimicrobial Activity of Titanium Dioxide Nano powders prepared via a Sol- gel Method***" Indian Journal of Natural Science,8 (49)2018.
- 25- Muntadher N. Zweid, Abbas F. Essa, Harith I. Jaafar "***The Investigation of Thermal Conductivity for Graphene Nanocomposite***" International Journal of Recent Research and Applied Studies,5(12),2017.
- 26- Abbas F. Essa , Afrah A. Ghazi K. Saeed "***Preparation light samples of bauxite zirconia composite using rice husk and enhancement the properties by Cu2O addition***" Journal of applied sciences research,12(6),2016.
- 27- Hussein.M. Ali ,Abbas F. Essa ,Satha.S. Batros , "***Gas sensitivity characterization of Cadmium oxide (CdO) Thin film deposited by spray pyrolysis technique for NO2 sensor***"ATTI DELLA " FONDAZIONE GIORGIO RONCIH,2016.
- 28- Esam A. Khudhair ,Abbas F. Essa, Shatha S. Batros "***Characterization Structural and morphological properties of ZnO:In thin films prepared by ultrasonic***"ATTI DELLA,54(5),2015.
- 29- Adnan M.Mahdi Bushra R.Mhdi,Abbas F. Essa "***Synthesis of Nano TiO2 Thin films by Sol-gel Dip-Coating Method***"The 5th International Conference for Nanotechnology and Advanced materials and their applications , university of Technology , Baghdad , Iraq, 2015.
- 30- Abbas F. Essa, Mouad A., Mohammed A. "***Physical and mechanical properties of polymer blends ( Asphalt - Epoxy – Polystyrene)***" Wasit Journal for Science and Medicine,8(2),2015.
- 31- Najlaa J., Abbas F. Essa , Ahmed J. "***Preparation and study Impact and Hardness Strength for Gravel Nano Particles***".J.THi-Qar Science,4(4),2014.
- 32- Sattar A. Abass, Abass F. Essa ,Amel D. Hussain "***Effect of decomposition temperature on crystallite size and strain of CaO***"Physical Sciences Research International,2(4),2014.
- 33- Abbas F. Essa "***Tensile characterization of polymer composite reinforced with gravel particles (GP)***" Wasit Journal for Science & Medicine,7(1),2014.
- 34- Abbas F. Essa, Ahmed J., Najlaa J. "***Effect of Water on Some Mechanical Properties for Gravel Particles/Polyester Composites***"Al-Nahrain Journal of Science,17(4),2014.

- 35- A.F.Essa, “ ***Mechanical and physical properties of natural fiber cement board for building partitions*** “Physical Science Research International, Vol.2(3), pp.49-53,2013.
- 36- N.J.Jubier, S. G. Khalil and A. F.Essa, "***Measurement Changes in Activation Energy, Hall Effect and Seebeck Effect of Lead Telluride Thin Films Prepared by Thermal Evaporation Technique with Different Annealing Temperatures***", Journal of Materials Science and Engineering B 1, No (6), (2011) .
- 37- N.N. Rammo ,Abbas F. Essa , M.N. Al-delami "***The Adhesion of HDPE and LDPE to copper and the use peel test to study the strength of adhesion bonding***" Al-Qadisiya Journal for science,15(2),2010.
- 38- A.F.Essa, "***The calculation of burn up for Cs – 137 to study fuel UO<sub>2</sub> by universal code ORIGEN***" Jour. Of wasit , Vol(2), Issue (1),2009.
- 39- Muneer H.J.,A.F.Essa, "***Study of electrical conductivity characteristic of tin dioxide films doped with Indium used as gas sensing element***", Jour. Of wasit , Vol(2), Issue (2),2009.
- 40- H.D.Al-Attabi, A.F.Essa, H.A.Yusr Al-Ammar, "***Study of Ratio Fission Width to Total Width for Fission Materials by Monoenergetic Neutrons (2-4 MeV)***" Jour. of Um-Salma, Bagh. Univ., Vol.(5).2008.
- 41- A.F.Essa, H.A.Yusr Al-Ammar, H.D.Al-Attabi, "***Effect of Completion Stage on Physical and Mechanical Properties for Cotton Cloth***" Irq. Jou of Sci. Bagh. Univ., Vol.(48), Issue No.(1), 2007.
- 42- H.A.Yusr Al-Ammar, A.F.Essa, H.D.Al-Attabi, "***A Study of absorption of Cobalt Ferrite for Radar Waves***", Jour. of Babylon Univ., Vol(14), Issue(4). Dec. 2007.
- 43- A.F.Essa, "***The influence of humidity on the peel strength of PE and PP to both copper and aluminum adhesion***" AL – Taqani Journal, Vol(17), No. 3, 2004.
- 44- A.F.Essa, "***Effect of the topography of copper and aluminum on the peel force of polymer***" AL – Taqani Journal, Vol(17), No. 3, 2004.

## **Committes**

- 1 – Member of the ministerial committee of experts in the physics departments in Iraq universities.
- 2 – Member of a ministerial committee to open graduate studies in the universities of Iraq.
- 3 – Chairman of the Promotion subcommittee at the College of Science.
- 4 – Chairman of the Central promotion committee at the University of wasit.
- 5 – Chairman of scientific committee of physics department.
- 6 – Member of committee for final examinations for several years in College of science.
- 7 – Member of the Graduate studies committee in the physics department.

**Dr.Firas Dashoor**  
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