

## *Curriculum vitae*

### **CONTACT**

Dr. Raid BANAT

Chemistry Department, Faculty of Sciences,

Al al-Bayt University

### **PERSONAL INFORMATION**

Citizenship: Jordan.

Sex: Male.

Marital Status: Married.

### **SPECIALIZATION**

Ph.D. Chemistry.

[Major: Physical Chem, Minor: Analytical Chem., Research: Physical Polymer

Chemistry ]

## **EDUCATION**

1. Ph.D. Chemistry. Middle East Technical University, Ankara, Turkey. May 2002  
  
Thesis: Polyethylene Oxide-Hydroxyapatite Composite and Microporous Polyethylene Oxide- Polymethacrylic Acid Polymer Complex Synthesis and Characterization.
2. MSc. Chemistry. Middle East Technical University, Ankara, Turkey. January 1997  
  
Thesis: Effect Of Annealing Temperature And Time On Mechanical Properties Of Crosslinked PE Film.
3. B.Sc. Chemistry. Yarmouk University, Irbid, Jordan. June 1994

## **EMPLOYMENT HISTORY**

1. Chairman of the chemistry department, Al al-Bayt University. Mafrq, Jordan. September 2020- present.
2. Associated Prof., Faculty of Sciences-Chemistry Department, Al al-Bayt University. Mafrq, Jordan. December 2016- present.
3. Assistant Prof., Faculty of Sciences-Chemistry Department, Al al-Bayt University. Mafrq, Jordan. October 2012- December 2016.
4. Full time lecturer, Faculty of Sciences-Chemistry Department, Al al-Bayt University. Mafrq, Jordan. September 2010- October 2012.
5. Production Manager, Eczacibasi<sup>1</sup> -Artema, Bilecik, Turkey. 2009- 2010.
6. Production Chief, Eczacibasi -Artema, Bilecik, Turkey. 2003- 2008.
7. Postdoctoral Scholar, TUBITAK-METU<sup>2</sup>, Ankara, Turkey. Aug-Dec, 2002.
8. R&T Assistantship, Chemistry Dept. METU\*, Ankara, Turkey. 1997-2002.
9. Chemistry Teacher, Alfateh School, Ankara, Turkey. 1998-2001.

10. Chemistry Teacher, Private Derssane, Ankara, Turkey. 1995-1997.

1- Annual Turnover 3 Billion US \$.

2-Middle East Technical University.

## **CONFERENCES & SEMINARS**

1. The 9th Jordan International Chemical Engineering Conference (JICHEC9), Le Royal Hotel, Amman, Jordan, 12-14 Oct. 2021.
2. Promoting regulatory and voluntary action by government and industry to phase out Lead in paint workshop. UN environment and Royal Scientific society, Amman Jordan, April 01, 2019.
3. Material testing instruments (tensile & compression) and applications workshop. Shimadzu & MSS, Le Grand Hotel, Amman, Jordan, February, 25, 2019.
4. International conference of chemistry and biosciences ICCB 2017, Al-Bayt University, Mafraq, Jordan, April 5-6, 2017.
5. The 14<sup>th</sup> Jordanian chemical conference "The role of chemical research in the development of Jordanian industry" Jordanian chemical society and Al al-Bayt University, Mafraq, Jordan, 9 April 2015.
6. International science conference "ICS-AABU-UKM" Al al-Bayt university and UKM, Mafraq, Jordan, 20-22 November 2012.
7. The international Energy, Water, Environment - Clean Technologies Center R&D Projects / initiatives workshop, Royal scientific society and USAID, Amman-Jordan , 20-22 Nov. 2011.
8. The international conference on materials in Jordan, Recent development and future resources. PSUT, Amman-Jordan, 9-11 April 2011.

9. The international Energy, Water, Environment - Clean Technologies Center R&D Projects / initiatives workshope, Royal scientific society and USAID, Amman-Jordan , 27-28 March 2011
10. IX. National Chemical Engineering Conference, Ankara, 22-25 June. 2010.
11. Nanotechnological Convertible Product: Research & Commercialization Conference and Project market, UIG-TASSA, Istanbul, Turkey. Dec. 2008.
12. Plating On Plastic, Rohm & Haas and Dupont, Bursa, Turkey. May 2008.
13. Nickel Uses And Surface Technology, Inco, Istanbul, Turkey. Jan 2007.
14. Plating On Plastic, Atotec, Bursa, Turkey. April 2005.
15. Inter. Industrial Production Techniques, Eczacibasi, Bilecik, Turkey. 2004.
16. Operator Health & Safety, Eczacibasi, Bilecik, Turkey. May 2004.
17. XVI National Chemistry Conference, Konya, Turkey. Sept. 10–13, 2002.
18. 12th Users' Meeting Esrf, Grenoble-France (Invited Participant). Feb–2002.
19. The Polymer Processing Society, Regional Meeting, Antalya, Turkey. (Member Of The Organising Committee). October 22–24, 2001.
20. XV. National Chemistry Conference, Istanbul, Turkey. Sept. 4–7, 2001.

### **TECHNICAL & MANAGEMENT TRAINING**

1. Decorative Plating Of Copper-Nickel-Chrome On Metals, Enthone Plating Academy, Langenfeld, Germany. 11–12 April 2006.
2. Physical Vapour Deposition (PVD), Istanbul Technical University, Bilecik, Turkey. March 2006.
3. Total Production Management (TPM), Japanese Consultant, Ecz. Turkey. 2005-2008.
4. Electroplating Techniques, Istanbul Technical University, Bilecik, Turkey. Sept. 2004.

5. Management Skills: Effective People Management, MCT, OKALIP Education Center. Istanbul-Turkey. 05-06. July. 2010.
6. Management Skills: Affecting & Convincing. BALTAS, OKALIP Education Center. Istanbul-Turkey. 30-31. Oct. 2008.
7. Management skills: Coaching skills, pdr international, Hilton, Istanbul, Turkey. 21–22 Jun. 2007.
8. Management Skills: Management & Being Manager, , Impetrio, Akmerkez, Istanbul. Turkey. 21–22 Nov. 2006.
9. Management Skills: Team Forming & Developing, Baltas, Hilton, Istanbul. Turkey. 22–23 Dec. 2005.
10. Management Skills: Time Management, Baltas, Eczacibasi Holding, Istanbul, Turkey. 07 Dec. 2005.

### **INDUSTRIAL EXPERIENCES & RESPONSIBILITIES**

1. Research & Development Industrial Mass Production.
2. Leading More Than 200 Production Working Staff.
3. Managing & Orienting Production Activities In Electroplating Unites.
4. Responsible For Different Coating Processes And Quality Control.
5. Committee Member Of TPM Autonomous Maintenance.
6. Leading TPM Activities In Electroplating Unites.
7. Responsible For Production Cost Management.
8. Familiar With Quality and Environmental Systems (ISO–9001 & ISO–14000)
9. Familiar With Yoke Poka, Figure Eight, Kaizan Problem Solving Techniques
10. Project Management Experience.
11. Industrial Wastewater Treatment & Management.
12. Operators Health and Safety Management.

## **RESEARCH INTERESTS**

### **Polymer Science And Technology.**

1. Polymer Composites, Blends & Biomaterials.
2. Biocompatible Foams & Porous Structures.
3. Hydrogels & Water Soluble Polymers.

### **Instrumentation & Process Command On**

1. FTIR, AAS, UV.
2. SEM, DSC, DMA, TGA.
3. Compression & Injection Moldings.
4. Single and Twin Screw Extruder & Brabender Mixer.
5. Synthesis Of Grafted Biomedical Polymers And Foamed Materials.
6. Universal Mechanical Testing Machine, Impact Tester, Melt Flow Index.
7. Annealing And/Or Aging By UV And Gamma Rays For Stability Analysis.
8. Mechanical And Thermal Analysis Of Reinforced Composites & Blends.

## **TARGET COURSES**

1. Physical Chemistry.
2. Polymer chemistry
3. Physical chemistry of Polymers
4. Applied and industrial chemistry
5. Analytical Chemistry
6. Degradation and stabilization of Polymers.
7. Mechanical & Physical Properties of Polymers.
8. Selected Topics In Electrochemistry (Electroplating)
9. Selected Topics in Industrial chemistry (Detergents)

## 10. Materials Science & Engineering.

### **TOUGHTED COURSES**

1. Special topics in chemistry (Master level)
2. Graduation research project
3. Physical chemistry, electrochemistry- reaction kinetics.
4. Physical chemistry, Thermodynamics.
5. Physical chemistry, practical.
6. Polymer chemistry.
7. Applied chemistry.
8. General chemistry.

### **PUBLICATIONS**

1. **Raid Banat**, Manal Al-Rawashdeh, Heba Alkhlaifat, Preparation of Oil Shale Ash Filled High Density Polyethylene Composite Materials and their characterization. Journal of Polymer Material, JPM-D20-028, Accepted.
2. **Raid Banat**, Heba Alkhlaifat, Alaa Al-shurafat. Thermal Analysis of the Oil Shale Ash Filled High Density Polyethylene Composite, Jordan Journal of Chemsitry, 16 (2), 61-67, 2021. Doi: 10.47014/16.2.2
3. **Raid Banat**; Malek Aljnaid; Manal Al-Rawashdeh, Investigation of mechanical, morphological and water absorption properties of Polyethylene/Olive Pomace Flour bio-composites, *Polyolefins Journal*, 9 (1) -, 2022, (doi: 10.22063/poj.2021.2903.1184). In Press.
4. Alaa Al-shurafat, **Raid Banat**, Properties of oil shale ash filled polypropylene composite material: mechanical and physical

- characterization. Asian J. Chem. 33 (9), 2175-2181, 2021.  
(doi.org/10.14233/ajchem.2021.23324)
5. Heba Al-Khlaifat, **Raid Banat**, Investigation of the Mechanical Behavior of the Oil Shale Ash Filled Chlorinated Polyvinyl Chloride Composite Material, International Journal of composite Materials, 11 (1), 13-21, 2021. (DOI: 10.5923/j.cmaterials.20211101.03)
  6. **Raid Banat**, Manal Al-Rawashdeh & Malek Aljnaid, Thermal Properties of Olive Pomace Filled Linear Low Density Polyethylene Bio-Composites, Journal of Macromolecular Science, Part B, 60:11, 957-969, (2021), DOI: 10.1080/00222348.2021.1923877
  7. Aljnaid, Malek and **Banat, Raid**. Effect of coupling agents on the olive pomace-filled polypropylene composite, e-Polymers, vol. 21, no. 1, pp. 377-390. 2021, <https://doi.org/10.1515/epoly-2021-0038>
  8. **Raid Banat** Olive Stone Flour as Potential Filler for Bio-composite Material: A Brief Review. American Journal of Polymer Science, 9(1): 10-15, 2019. (DOI: 10.5923/j.ajps.20190901.02)
  9. Abdullah Al-Mashaqbeh, Bassam El-Eswed, **Raid Banat**, Fawwaz I. Khalili. Immobilization of organic dyes in geopolymeric cementing material, Environmental Nanotechnology Monitoring & Management 10, 351-359, 2018. (DOI:10.1016/j.enmm.2018.08.004)
  10. Hashem Bany-Aiesh, **Raid Banat** and Khaldoun Al-Sou'od, Kinetics and Adsorption Isotherm of Ibuprofen onto Grafted  $\beta$ -CD/Chitosan Polymer. American Journal of Applied Science, 12 (12): 917-930. 2015  
(DOI: 10.3844/ajassp.2015.917.930)



- 11. Raid Banat**, Mohammad M. Fares, Thermo-Gravimetric Stability of High Density Polyethylene Composite Filled with Olive Shell Flour. American Journal of Polymer Science, 5(3): 65-74, 2015.  
(DOI: 10.5923/j.ajps.20150503.02)
- 12. Raid Banat**, Mohammad M. Fares, Olive oil waste filled high density polyethylene bio-composite: mechanical, morphological and water absorption properties, International Journal of Composite Materials , 5(5): 133-141, 2015.  
(DOI: 10.5923/j.cmaterials.20150505.05)
- 13. Raid Banat**, Effect of pH, temperature and monomer mole ratios on the swelling properties of Polyethylene oxide-Polymethacrylic acid-Polyacrylamide (PEO-PMAA-PAAM) interpolymer complex (IPC). Jordan journal of chemistry, Vol.10 No. 2, pp 119-129, 2015.
- 14. Raid Banat**, Burhan Tecen, Hakan Bahar, Nimet Ozen. Coating of vetrified ceramic articles by PVD method. European **Patent** Grant (EP2292810 B1) Apr 3,2013.
- 15. Raid Banat**, Teoman Tincer, Khaldoun Al-sou'od. Template Polymerization of Methacrylic acid and Acrylamide Monomers in The Presence of Polyethylene oxide. Jordan Journal of chemistry, Vol.7, No. 3, pp 267-278, 2012.
- 16. M. Ercengiz Yildirim, Emel Coskun, Birsu Taspinar Betul Kivanc and Raid Banat** Study On Weight Reduction and Nickel Enrichment of Dangerous Solid Wastes (Filtler Cake) of Nickel-Chrome electroplating Process. Osmangazi University & Eczacibasi-Artema. Bilecik, Turkey. (2008)

17. Belgin Karabacakoglu, Emre Guleryuz, Burcin Atilgan, Burcu Atalay, Seda Ergul, Abdulkemir Erbil and **Raid Banat**. Recovery of Copper and Zinc Metals from Brass Casting Products. Eczacibasi-Artema Osmangazi Universty. Bilecik, Turkey. (2008)
18. **Raid Banat** and T. Tincer, A Study on Properties of Crosslinking of Polyethyleneoxide and Hydroxyapatite-Polyethyleneoxide Composite 488–496 2003. *J Appl Polym Sci* , 90, (2003)
19. **Raid Banat** and T. Tincer, A Study on Preparation of Microporous Polymethacrylic acid(PMAA)-Polyethylene oxide (PEO) Polymer Complex. "Fibers and Polymers Workshop ESRF ", Grenoble France. (2002)
20. **Raid Banat** and T. Tincer, Polymethacrylic acid Porous Structure via Polyethylene-oxide Preparation and Characterization. *Polymer Processing Society (PPS) Regional Meeting-PPS–2001 Antalya Turkey* (2001)
21. **Raid Banat** ve T. Tincer, Effect Of Annealing Temperature And Time On Mechanical Properties Of Crosslinked Polyethylene Film. XV. National Chemistry Conference, Istanbul, Turkey. (2001)

### **Supervised Master Thesis**

1. Hashem Bany-Aiesh "Kinetics and Adsorption Isotherm of Ibuprofen onto Grafted  $\beta$ -CD/Chitosan Polymer", MSc Thesis (2015), Department of Chemistry, Al al-Bayt University, Jordan.
2. Malek Aljnaid "Olive pomace filled polypropylene composite: mechanical and thermal behavior", MSc Thesis (January-2021), Department of Chemistry, Al al-Bayt University, Jordan.
3. Alaa Al-shurafat "Oil shale ash filled polypropylene composite: mechanical

- and thermal investigation”, MSc Thesis (January-2021), Department of Chemistry, Al al-Bayt University, Jordan.
4. Heba Alkhlaifat “Oil shale ash Filled chlorinated polyvinyl chloride (CPVC) polymer composite: mechanical and physical properties”, MSc Thesis (Septemper- 2021), Department of Chemistry, Al al-Bayt University, Jordan.
  5. Reyad Abu-Ghalyoun “Silane treated oil shale ash filled low density polyethylene composite”, MSc Thesis (September-2021), Department of Chemistry, Al al-Bayt University, Jordan.
  6. Abderahaman Al-khazaaleh “Effect of oil shale, oil shale ash and treated oil shale ash on the polypropylene matrix composite”, MSc Thesis (2021), Department of Chemistry, Al al-Bayt University, Jordan. (continued)
  7. Mohammad Wael “Pozzolana Filled High density polyethylen (HDPE) polymer composite: mechanical and physical properties”, MSc Thesis (2022), Department of Chemistry, Al al-Bayt University, Jordan. (continued)

### **AWARDS & HONORS**

1. ASAI. Scholar, NJ, USA.
2. Tuition Waver For The Ph.D. Programme. METU, Ankara, Turkey.
3. Postdoctoral Scholar, TUBITAK-METU. METU, Ankara, Turkey.

### **GRANTS & FUNDS**

- 1- Ministry of Higher Education and Scientific Research: Scientific Research Fund Grant No. Bas/02/3/2012.

**112,500\$**

- 2- Al-alBayt University: Deanship of Scientific Research, No. 2012/4618

**16,000\$**

3- Eczacibasi-Artema: Superhydrophobic Coating Project, 2009-2010,

**100,000\$**

### **LANGUAGES**

Arabic, English & Turkish.

### **REFERENCES**

1. Prof. Dr. Teoman Tincer\*. Phone: 03122103203 Email: [teotin@metu.edu.tr](mailto:teotin@metu.edu.tr)
2. Prof. Dr. Kemal Alyuruk\*. Phone: 03122103229 Email: [alyuruk@metu.edu.tr](mailto:alyuruk@metu.edu.tr)
3. Prof. Dr. Nesrin Hasirci\*. Phone 03122103210Email: [nhasirci@metu.edu.tr](mailto:nhasirci@metu.edu.tr)

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Turkey.*