# CURRICULUM VITAE

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**Present Position** Associate Professor of Chemistry Department of Chemistry,

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**Specialization** Materials Science and Polymers aaenizi@gmail.com

## **Professional Experience (Employment):**

1. Associate Professor, Chemistry Dept., College of Science: 2018 – now

- 2. Assistant Professor, Chemistry Dept., College of Science: 2014 2018
- **3.** Lecturer of Materials and Polymer Chemistry at Chemistry Department, Faculty of Science, **King Saud University**, Kingdom of Saudi Arabia 2008- 2013
- **4.** Demonstrator at Chemistry Department, Faculty of Science, **King Saud University**, Kingdom of Saudi Arabia 2000-2007
- **5.** Teacher of Chemistry at High School, Saudi Arabia, 1997-2000.

## Qualifications & Academic Degrees:

- Doctor of Philosophy (Ph. D.) (2013) King Saud University, Kingdom of Saudi Arabia- Texas University Ustin-USA. Thesis Title: "Preparation and Characterization of Nano-composite Materials For Industrial Applications",2013
- 2. M.Sc. In Organic Chemistry (2006), King Saud University, Kingdom of Saudi Arabia. Thesis Title: " Optical and Thermal Properties of Some Organic Polymers Doped by Organic Dye Lasers", 2006
- **3. B.Sc.** in Chemistry (1997) including final year project on organic synthesis, **King Saud University**, Kingdom of Saudi Arabia.

### Membership

- 1. American Chemical Society, US.
- 2. Royal Chemical Society, UK.
- 3. Saudi Chemical Society, Saudi Arabia.
- 4. Membership committees assess and develop curricula for the chemistry for high school students.

#### Current Research Interest:

- 1. Catalysis and Polymer Chemistry.
- 2. Nanotechnology and Materials Science.
- **3.** Renewable Energy and Fuels.

### **Projects:**

- 1. Research Grant, the National Plan for Science, Technology and Innovation, Saudi Arabia. Title: (One-dimensional Nanostructured Photoanodes for Efficient Solar-driven Hydrogen Production). 2014—2017.
- **2.** Processing of Polymer Nanofibers, in Principal for "KAIN-LEEDS Joint Projects, 2009.
- **3.** Research Grant, the National Plan for Science, Technology and Innovation, Saudi Arabia Title: Synthesis of novel core-shell mesoporous zeolite catalysts with controllable isolated active sites towards the oxidation of olefins and ketones in liquid phase.2015-2018.

#### **Conferences:**

- 1. Water Desalination Conference in Arab Countries, Riyadh, 12-15 April 2009.
- **2.** The international Conference for Nanotechnology Industries, The Leading technology of 21<sup>st</sup> Century, April 5-7 2009, King Abdullah Institute for Nanotechnology, King Saud University, Riyadh-Saudi Arabia.
- **3.** The Arab International Conference in Recent Advances in Physics and Materials Sciences (RAPMS), Alexandria University, Alexandria, Egypt, 18-20 Sep 2005.
- **4.** The 3<sup>rd</sup> Saudi International Nanotechnology Conference 2014 (3SINC), 1-3 December, at King Abdul Aziz City for Science and Technology (KACST), Riyadh, Kingdom of Saudi Arabia.

# List of selected publications:

- 1. A MOF-based Ultra-Strong Acetylene Nano-trap for Highly Efficient C<sub>2</sub>H<sub>2</sub>/CO<sub>2</sub> Separation, Zheng Niu, Xili Cui, Tony Pham, Gaurav Verma, Pui Ching Lan, Chuan Shan, Huabin Xing, Katherine A. Forrest, Shanelle Suepaul, Brian Space, Ayman Nafady, Abdullah M. Al-Enizi, and Shengqian Ma, Angew. Chem. Int. Ed. 2021, 60, 5283-5288.
- 2. Nanospace Engineering of Metal—Organic Frameworks throughDynamic Spacer Installation of Multifunctionalities for EfficientSeparation of Ethane from Ethane/Ethylene Mixtures, Cheng-Xia Chen, Zhang-Wen Wei, Tony Pham, Pui Ching Lan, Lei Zhang,Katherine A. Forrest, Sha Chen, Abdullah M. Al-Enizi, Ayman Nafady, Cheng-Yong Su and Shengqian Ma, *Angew. Chem. Int. Ed.* 2021, 60, 1-8.

- **3.** Synthesis of NiOx@NPC composite for high-performance supercapacitor via waste PET plastic-derived Ni-MOF, **Abdullah M. Al-Enizi**, Mohd Ubaidullah, Jahangeer Ahmed, Tansir Ahamad, Tokeer Ahmad, Shoyebmohamad F. Shaikh, and Mu. Naushad, *Composites part B*, 2020, 183, 107655.
- **4.** Self-grown one-dimensional nickel sulfo-selenide nanostructured electrocatalysts for water splitting reactions, **Abdullah M. Al-Enizi**, Shoyebmohamad F. Shaikh, Mohd Ubaidullah, Mohamed A. Ghanem, and Rajaram S. Mane, *International Journal of Hydrogen Energy 2020, 45*, 15904-15914.
- **5.** Reaction Environment Modification in Covalent Organic Frameworks for Catalytic Performance Enhancement, Qi Sun, Yongquan Tang, Briana Aguila, Sai Wang, Feng-Shou Xiao, Praveen K. Thallapally, **Abdullah M. Al-Enizi**, Ayman Nafady, and Shengqian Ma, *Angew. Chem.* **2019**, *131*, *8762-8767*.
- 6. NbO<sub>2</sub> Electrocatalyst Toward 32% Faradaic Efficiency for N<sub>2</sub> Fixation, Linsong Huang, Jiawen Wu, Peng Han, Abdullah M. Al-Enizi, Tahani M. Almutairi, Lijuan Zhang, and Gengfeng Zheng, Small Methods 2019, 3, 1800386
- 7. Unconventional morphologies of CoO nanocrystals via controlled oxidation of cobalt oleate precursors. W Xu, Z Wang, L Shang, H Zhang, AM Al-Enizi, Y Tang, G Zheng, *Chem. Commun.* 2018, 54, 3867-3870.
- **8.** CoCr<sub>7</sub>C<sub>3</sub>-like nanorods embedded on carbon nanofibers as effective electrocatalyst for methanol electro-oxidation, **Abdullah M.Al-Enizi**, Robert M.Brooks, M.M.El-Halwany, Ayman Yousef, Ayman Nafady, R.M. Abdel Hameed, *International Journal of Hydrogen Energy*, 2018, 43, 9943-9953.
- 9. Tuning of CO<sub>2</sub> Reduction Selectivity on Metal Electrocatalysts, Yuhang Wang, Junlang Liu, Yifei Wang, **Abdullah M. Al-Enizi**, and Gengfeng Zheng, *Small* 2017, 1701809 (1-15).
- 10. New insight into the synthesis of large-pore ordered mesoporous materials, Jing Wei, Zhenkun Sun, Wei Luo, Yuhui Li, Ahmed A Elzatahry, Abdullah M Al-Enizi, Yonghui Deng, Dongyuan Zhao, J. Am. Chem. Soc. 2017, 139, 1706-1713.
- 11. Epitaxial Growth of Lattice-Mismatched Core—Shell TiO<sub>2</sub>@ MoS<sub>2</sub> for Enhanced Lithium-Ion Storage, Rui Dai, Anqi Zhang, Zhichang Pan, **Abdullah** M Al-Enizi, Ahmed A Elzatahry, Linfeng Hu, Gengfeng Zheng *Small*, 2016, 12 (20), 2792-2799.
- 12. Co-Ni-Based Nanotubes/Nanosheets as Efficient Water Splitting Electrocatalysts, Siwen Li, Yongcheng Wang, Sijia Peng, Lijuan Zhang, Abdullah M Al-Enizi, Hui Zhang, Xuhui Sun, Gengfeng Zheng, Advanced Energy Materials, 2016, 6 (3) 1501661.
- 13. From water oxidation to reduction: homologous Ni-Co based nanowires as complementary water splitting electrocatalysts, Zheng Peng, Dingsi Jia, Abdullah M Al-Enizi, Ahmed A Elzatahry, Gengfeng Zheng, Advanced Energy Materials, 2015, 5 (9), 1402031.

**14.** Nanoparticle superlattices as efficient bifunctional electrocatalysts for water splitting, Jun Li, Yongcheng Wang, Tong Zhou, Hui Zhang, Xuhui Sun, Jing Tang, Lijuan Zhang, **Abdullah M Al-Enizi**, Zhongqin Yang, Gengfeng Zheng, *J. Am. Chem. Soc*, *2015*, *137* (*45*), *14305-14312*.

#### **Patents:**

Title: Synthesis of Solid State Dye Laser by Gamma Irradiation Polymerization

Method

Inventors: Attiah A Al-ghamdi, Abdullah M Al-Enizi

United States Patent 20070034831

Title: Oxygen reduction reaction electrocatalyst

Inventors: Abdullah M Al-Enizi, Tansir Ahamad, Saad M Alshehri, Mu Naushad

United States Patent 201715839693

Title: Method of fabricating a photocatalyst for water splitting Inventors: **Abdullah M Al-Enizi,** Tansir Ahamad, Ayman Yousef

United States Patent 201910456776