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## Qualifications

PhD, Hybrid Metal Oxide Nanoarrays: Fabrication, Properties and Energy Conversion Applications, Chemistry  
Department of King Fahd University of Petroleum and Minerals  
Jan 2014 → Aug 2018  
Award Date: 17 May 2018

## Employment

### Assistant Professor

CBI Green Chemicals and Energy Centre  
China Beacons Institute  
1 Feb 2024 → present

### Advanced Energy and Environmental Materials & Technologies Research Group

27 May 2024 → present

## Research outputs

### Strategically coupled tungsten oxide-zinc oxide photosystems for solar-driven nerve agent simulant degradation and hydrogen evolution

Khan, I., Rizwan Tariq, M., Ahmad, M., Khan, I. & Zhang, B., 19 Feb 2025, In: Separation and Purification Technology. 354, 129078.

### Highly selective sensing of toxic NO<sub>x</sub> gases for environmental monitoring using Ru-doped single walled TiO<sub>2</sub> nanotube: A density functional theory study

Ragab, A. H., Al-Mhyawi, S. R., Kamran, A. W., Khan, I. & Khan, I., 1 Oct 2024, In: Sensors and Actuators A: Physical. 376, 115632.

### Materials advancements in solid-state inorganic electrolytes for highly anticipated all solid Li-ion batteries

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### Nanomaterial-based probes for iodide sensing: synthesis strategies, applications, challenges, and solutions

Mansha, M., Abbas, N., Altaf, F., Khan, S. A., Khan, I. & Ali, S., 4 Mar 2024, In: Journal of Materials Chemistry C. 12, 14, p. 4919-4947 29 p.

### Shape-Controlled First-Row Transition Metal Vanadates for Electrochemical and Photoelectrochemical Water Splitting

Khan, I., Gu, Y. & Wooh, S., Jan 2024, In: Chemical Record. 24, 1, e202300127.

### Tailoring performance of hybrid supercapacitors by fluorine-rich block copolymer-derived carbon coated mixed-phase TiO<sub>2</sub> nanoparticles

Khan, I., Shah, S. S., Hendi, A. H., Ashraf, M., Cho, Y., Ali, S. & Wooh, S., 15 Dec 2023, In: Journal of Alloys and Compounds. 968, 172175.

Carbon nitride (C<sub>3</sub>N<sub>3</sub>) decorated with non-noble metal Ni<sub>2</sub>P Co-catalyst based nanocomposites for photocatalytic water splitting

Ashraf, M., Ullah, N., Raziq, F., Khan, I., Alhooshani, K. R., Ganiyu, S. A. & Tahir, M. N., 1 Dec 2023, In: *Electrochimica Acta*. 470, 143296.

Magnetism-driven iron oxide nanocomposites for energy and environmental solutions: harnessing magnetism

Sarfraz, N., Ashraf, M., Ali, S. & Khan, I., Dec 2023, In: *Materials Today Sustainability*. 24, 100589.

Bandgap Engineering of Melon using Highly Reduced Graphene Oxide for Enhanced Photoelectrochemical Hydrogen Evolution

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Robust electrocatalysts decorated three-dimensional laser-induced graphene for selective alkaline OER and HER

Khan, I., Baig, N., Bake, A., Haroon, M., Ashraf, M., Al-Saadi, A., Tahir, M. N. & Wooh, S., Sept 2023, In: *Carbon*. 213, 118292.

Biomass-derived graphene-based supercapacitors

Sarfraz, N., Khan, I. & Hendi, A. H., 20 Jul 2023, *Biomass-Based Supercapacitors: Design, Fabrication and Sustainability*. Wiley, p. 269-287 19 p.

Photodegradation of orange II dye using p-n junction NiO/TiO<sub>2</sub> composite, and assessment of its biological activities

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Ashraf, M., Ullah, N., Khan, I., Tremel, W., Ahmad, S. & Tahir, M. N., 26 Apr 2023, In: *Chemical Reviews*. 123, 8, p. 4443-4509 67 p.

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Scavenging of Organic Pollutant and Fuel Generation through Cost-Effective and Abundantly Accessible Rust: A Theoretical Support with DFT Simulations

Khan, N., Gul, T., Khan, I., Alabbad, E. A., Ali, S., Saeed, K. & Khan, I., Jan 2023, In: *Materials*. 16, 1, 142.

Nano/micro-structural engineering of Nafion membranes for advanced electrochemical applications

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Strategies for Improved Electrochemical CO<sub>2</sub> Reduction to Value-Added Products by Highly Anticipated Copper-Based Nanoarchitectures

Khan, I., Jan 2022, In: *Chemical Record*. 22, 1, e202100219.

Molybdenum impregnated g-C<sub>3</sub>N<sub>4</sub> nanotubes as potentially active photocatalyst for renewable energy applications

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A Bifunctional 2D Interlayered β-Cu<sub>2</sub>V<sub>2</sub>O<sub>7</sub>/Zn<sub>2</sub>V<sub>2</sub>O<sub>6</sub> (CZVO) Heterojunction for Solar-Driven Nonsacrificial Dye Degradation and Water Oxidation

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### Polymer Blends

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## **Press/Media**

## **Projects**

2024	Lorem ipsum dolor sit amet
2023	Lorem ipsum dolor sit amet
2022	Lorem ipsum dolor sit amet
2021	Lorem ipsum dolor sit amet
2020	Lorem ipsum dolor sit amet
2019	Lorem ipsum dolor sit amet