

## Professor KANG, ZHENHUI

Department of Materials Science and Engineering, Faculty of Innovation Engineering  
Macau University of Science and Technology



Office :

Tel. :

E-mail : zhkang@must.edu.mo

### Academic Qualification

Ph.D. in Inorganic Chemistry, Northeast Normal University, 2005

B.S. in Applied Chemistry, Northeast Normal University, 1999

### Teaching Area

Catalytic Chemistry

### Research Area

Catalytic applications of carbon nanomaterials

Biological applications of carbon nanomaterials

### Working Experience

2006–2009, Research Fellow, Center of Super-Diamond and Advanced Films (COSDAF) and Department of Physics and Materials Science, City University of Hong Kong, Hong Kong SAR.

2008 – present, Professor, Institute of Functional Nano & Soft Materials (FUNSOM), Soochow University, Suzhou, China.

2021 – present, Professor, Department of Materials Science and Engineering, Faculty of Innovation Engineering, Macau University of Science and Technology, Macau, China.

### Academic Publication ( selected )

**Z.H. Kang**, Coupling of nanocrystal hexagonal array and two-dimensional metastable substrate boosts H<sub>2</sub>-production, *Nat Commun.*, 13, 5828 (2022).

**Z.H. Kang**, A metal-free photocatalyst for highly efficient hydrogen peroxide photoproduction in real seawater, *Nat. Commun.*, 12, 483 (2021).

**Z.H. Kang**, High-throughput glycolytic inhibitor discovery targeting glioblastoma by graphite dots assisted LDI mass spectrometry, *Sci. Adv.*, 8, eabl4923 (2022).

**Z.H. Kang**, Bandgap engineering of two-dimensional C<sub>3</sub>N bilayers, *Nat. Electron.*, 4, 486–494 (2021).

**Z.H. Kang**, Extraordinary Acidic Oxygen Evolution on New Phase 3R-Iridium Oxide, *Joule*, 5, 3221-3234 (2021).

**Z.H. Kang**, Advanced hydrogen evolution electrocatalysts promising a sustainable hydrogen and chlor-alkali co-production, *Energy Environ. Sci.*, 14, 6191-6210 (2021).

**Z.H. Kang**, Pt-O bond as an active site superior to Pt<sub>0</sub> in hydrogen evolution reaction, *Nat. Commun.*, 2020, 11, 490 (2020).

**Z.H. Kang**, Cable-like Ru/WNO@C Nanowires for Simultaneously High efficient Hydrogen Evolution and Low-energy Consumption Chloralkali Electrolysis, *Energy Environ. Sci.*, 12, 2569-2580 (2019).

**Z.H. Kang**, A Co<sub>3</sub>O<sub>4</sub>-CDots-C<sub>3</sub>N<sub>4</sub> three component electrocatalyst design concept for efficient and tunable CO<sub>2</sub> reduction to syngas", *Nat Commun.* 8: 1828 (2017).

**Z.H. Kang**, Metal-free efficient photocatalyst for stable visible water splitting via a two-electron pathway", *Science* 347: 970 (2015)

### Patents

康振輝、劉陽、基於電激勵的瞬態電壓測試系統，中國實用新型專利，ZL 202220025254.9，2022.

康振輝、劉陽、一種瞬態電流測試系統，中國實用新型專利，ZL 202220025253.4，2022.

康振輝、劉陽，爆炸反應瞬態電壓測量系統，中國實用新型專利，ZL 202220024809.8，2022.

康振輝、劉陽，瞬態光電壓測量系統，中國實用新型專利，ZL 202220025441.7，2022.

康振輝、劉陽，生物活性物質瞬態光電壓測量組件、裝置及方法，中國發明專利，ZL 202210000646.4，2022.

康振輝、劉陽，瞬態光電壓測試樣品組件，中國發明專利，ZL 202210000656.8，2022.

康振輝、劉陽，瞬態光電壓測試樣品組件、瞬態光電壓測量裝置及方法，中國發明專利，ZL 202210000648.3，2022.

康振輝、劉陽，顆粒尺度樣品原位反應中的瞬態光電壓測量系統及方法，中國發明專利，ZL 202210000652.X，2022.

康振輝、劉陽，一種液態原位反應中瞬態光電壓測量系統，中國發明專利，ZL 202210000647.9，2022.

趙芮、康振輝、王大磊、董彬，一種可實現光熱調配的復合材料及其製備方法與應用，中國發明專利，ZL 202110821047.4，2022.

劉堅、石瑞、潘培晨、呂蕊、康振輝、侯廷軍，一種己糖激酶2抑制劑的篩選方法和小分子化合物在抗腫瘤藥物中的應用，202110429488.X，2022.

康振輝、劉陽、李灝、黃健，可有效提高農作物產量和抗病能力的碳納米顆粒的製備方法，ZL 201711401269.0，2020.

### Professional Society Membership

Fellow, The Royal Society of Chemistry