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應用物理及材料工程研究院
INSTITUTO DE FÍSICA APLICADA E ENGENHARIA DE MATERIAIS
INSTITUTE OF APPLIED PHYSICS AND MATERIALS ENGINEERING

IAPME Seminar

Research and Applications of Green Low-Carbon Micro-Nano Composite Materials

3 February 2026

Prof. Yihe ZHANG
China University of Geosciences
Venue: N23-1004b
Time: 14:30 - 16:00
Hosted by: Prof. Guoxing SUN

Abstract

Focusing on the frontier of international materials science and the strategic demands of "dual carbon" goals, this paper reports the research and application of optical, electrical and environmental functional effects of green low-carbon micro-nano composite materials. The research scope covers nano-composite photocatalytic materials, graphene and polymer composite materials, comprehensive utilization of mineral resources, as well as new mineral composite materials.

Biography

Prof. Yihe ZHANG, Doctoral Supervisor; Academician of both the Russian Academy of Engineering and the Russian Academy of Natural Sciences; Fellow of the Chinese Society for Micro-Nano Technology; Expert receiving a special government allowance from the State Council. Main Research Areas: Comprehensive utilization of resources and materials for environmental energy and health, including polymer composite materials, graphene-based optoelectronic catalytic nanocomposites, full-component utilization of mineral resources, and green low-carbon mineral composite materials. Has undertaken over 40 projects, including the National Key R&D Program, the 863 Program, and the National Natural Science Foundation of China. Published over 700 SCI papers in journals such as Nat. Comm., Adv. Mater., and Angew. Chem. Int. Ed. (with nearly 40,000 SCI citations and an H-index of 111); Edited monographs and textbooks including Mineral Composite Materials, Composite Materials Science (a planned textbook by the Teaching Guidance Committee for Materials in Higher Education Institutions under the Ministry of Education), Material Preparation Chemistry, Low-Carbon Material Utilization of Geological Resources and Green Mine Construction, and Recycling of Mineral Resources and New Materials; Holds over 100 authorized domestic and international invention patents, with multiple technologies implemented and transferred; Received numerous scientific awards, including the Second Prize of Natural Science Award from the Ministry of Education, the Second Prize of Land and Resources Science and Technology Award, and the Second Prize of Natural Science Award of Beijing, and participated in the formulation of national or industry standards. Supervised over 160 doctoral and master's students. Prof. Yihe ZHANG is an authoritative expert in the field of Green Low-Carbon Mineral Composite Materials, with a focused research interest in Polymer composites and Graphene and Photocatalytic Nanocomposites.

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