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Lecture on

Advanced Nanomaterials and Nanocatalysts to Combat Climate Change

by

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ABSTRACT

Advanced Nanomaterials and Nanocatalysts to Combat Climate Change

Energy and environment are two of our critical societal challenges. Climate change hits a giant weak spot in human history. Disproportionate use (or misuse) of natural resources, including fossil fuels, created an extreme imbalance on planet earth and the first priority of all of us is to take on this challenge. The synthesis of a new class of dendritic fibrous nano-silica (DFNS) based nano-catalysts was recently reported. More than 150 groups worldwide are now using our patented DFNS for various applications such as catalysis, solar-energy harvesting, energy storage, self-cleaning antireflective coatings, surface plasmon resonance-based ultrasensitive sensors, CO2 capture, and biomedical applications. Using recent results on synthesis and application fibrous nano-silica (including single-atom catalysis, black gold, amorphous zeolites and defected silica) for fine chemical synthesis, solar energy harvesting, CO2 capture-conversion and waste plastic to chemicals, nanocatalysis can combat climate change and protect the environment.

Google Meet Link: https://meet.google.com/oqw-gysp-zoq

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