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N-Doped Porous Activated Carbon Monolith Using for CO2/N2 Selectivity

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Abstract:

Hierarchical porous carbon (HPC) monolithic with 3D network has received considerable attention due to their potentially technological application as candidates for electrochemical energy storage devices such as capacitors, lithium ion batteries, solar cells, sorbent for toxic gas separation and greenhouse gas capture for their well-defined pore dimensions and topologies. Synthetic polymer based hierarchical nano structured carbons are particularly attractive for their consistent pore dimensions which can be adjustable on long length scales, so that infusibility of guest species could be improved through its unique hierarchical pores. N-doped HPC monoliths exhibit multifaceted features such as tunable textural properties, excellent thermal and chemical stability, which are remarkable physicochemical properties that are answerable for micro/nanostructure porous carbons perfect candidates for emerging substrates in nanotechnology science.

Biography:

Dr. Alabadi Akram has the expertise in chemistry of micro porous polymers and their applications in petroleum fields, lubricant oils properties and enhanced oil recovery where he contributed over 7 articles. Currently, he is holding the chemist in lube oil department at South Refineries Company, Basra, Iraq. In over 17 years, Dr. Alabadi Akram also has external lecture at university of Basra.

Speaker Publications:

1."Imine-Linked Polymer Based Nitrogen-Doped Porous Activated Carbon for Efficient and Selective CO2 Capture"; Journal of Scientific Reports,Vol-06, 2016.

2. "Square CdS Micro/Nanosheets as Efficient Photo/Piezo-bi-Catalyst for Hydrogen Production"; Journal ofCatalysis Letters / Vol-150(2020) /pp(3059-3070).

3."Ultrahigh-CO 2 Adsorption Capacity and CO 2 /N 2 Selectivity by Nitrogen-Doped Porous Activated Carbon Monolith "; Journal of Bulletin of the Chemical Society of Japan,Vol-93,Issues-3,2020.

4. "Graphene oxide-polythiophene derivative hybrid nanosheet for enhancing performance of supercapacitor ";Journal of Power Sources/Vol– 306, 2016.

5. "Nitrogen-doped activated carbons derived from a co-polymer for high supercapacitor performance";J. Mater. Chem. AVL /Vol 2, 2014.

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