

International Conference on MATERIALS RESEARCH AND DEVELOPMENT

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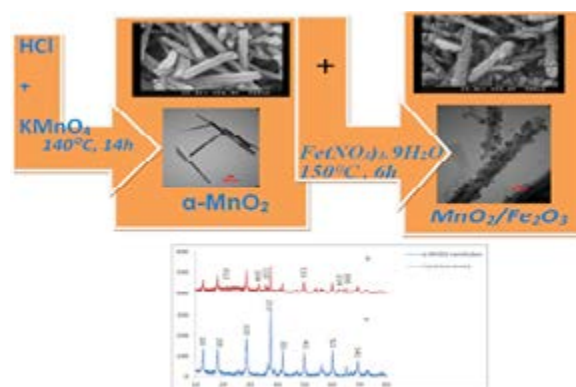
International Conference on CHEMISTRY AND APPLIED RESEARCH

October 29-30, 2018
Prague, Czech Republic

Growth of Fe₂O₃ nanoparticles on α-MnO₂ nanotubes by hydrothermal routs

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Manganese has attracted a great attention over the last years due to its interesting structural flexibility which made it a very important material in many scientific and industrial fields, such as energy storage devices, biosensors, and catalysis. Tetragonal pure phase hierarchical α-MnO₂ nanotubes were successfully prepared using KMnO₄ and HCl (32%) with mole ratio of 1 to 4 respectively, at 140°C for a period of 14 h, then the produced α-MnO₂ neutralized, cleaned, and filtered. In separate experiment, Fe₂O₃ nanoparticles were grown on the cleaned filtered α-MnO₂ nanotubes at 150°C for 6 h using Fe(NO₃)₃·9H₂O as iron precursor, the two steps were conducted in Teflon lined hydrothermal reactor. The prepared α-MnO₂ nanotubes and the grown Fe₂O₃/α-MnO₂ were characterized using XRD, FE-SEM, EDS, and TEM techniques.



Biography

Abdulkareem M A Al-Sammarraie 2002 has completed his PhD at the age of 43 years from Baghdad University. He is the Head of Department of Chemistry at the College of Science. He has published more than 38 papers in reputed journals.

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