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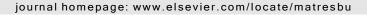
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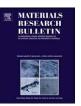
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Synthesis and characterization of new composites: PANI/Na-AISBA-3 and PANI/Na-AISBA-16

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## ABSTRACT

The new aluminosilicate materials (Na-AISBA-3 and Na-AISBA-16) were synthesized for application in the preparation of composites. Silica mesoporous materials were obtained following the sol—gel method and post-synthesis alumination. These methods were effective for the synthesis of SBA-3 and SBA-16, showing XRD patterns and other characteristics in agreement with the literature.

Aniline-saturated hosts were prepared by adsorption of aniline (exposed to the equilibrium vapors from liquid aniline) into the mesoporous materials. Polyaniline/Na-AlSBA-3 (PANI-3) and polyaniline/ Na-AlSBA-16 (PANI-16) composites have been synthesized by an in situ polymerization of aniline- saturated hosts. TG, FTIR, XRD, SEM and TEM were used to characterize the resulting composites. These studies show that PANI is generated inside the channel of the hosts. PANI-16 has an amount of emeraldine salt higher than PANI-3 composite. The electrical conductivity measurements confirmed that PANI and mesoporous materials were true hybrid nanocomposites. The conductive properties of these composites were compared with those of other composites

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(polyaniline/Na-AIMCM-41 and polyaniline/ Na-AISBA-15) reported.

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