

## Hybrid thiacalix[4]arene/SiO<sub>2</sub> nanoparticles: synthesis and selective adsorption of aniline and phenol nitro derivatives

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### Abstract

© 2016, Springer Science+Business Media New York. Hybrid thiacalix[4]arene/SiO<sub>2</sub> nanoparticles based on a thiacalixarene derivative containing simultaneously three benzyl and one triethoxysilyl groups at the lower rim and silicon dioxide nanopowder were obtained for the first time. The adsorbing properties of the synthesized hybrid organo-inorganic nanoparticles in relation to aromatic guest molecules (2,4,6-trinitrophenol, 2,4-dinitrophenol, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 2,4-dinitroaniline) were studied in comparison with unmodified silicon dioxide particles.

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### Keywords

adsorption, silicon dioxide, surface modification, thiacalix[4]arene