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Recent applications of zeolites, natural nanostructure materials

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The development of zeolite applications in chemistry is reviewed. The report contains 151 references.

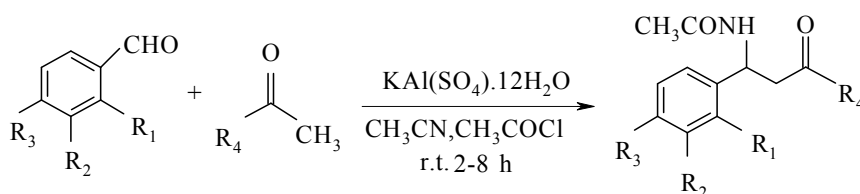
KAl(SO₄)₂·12H₂O: an efficient heterogeneous alternative for one-pot synthesis of β-acetamido ketones

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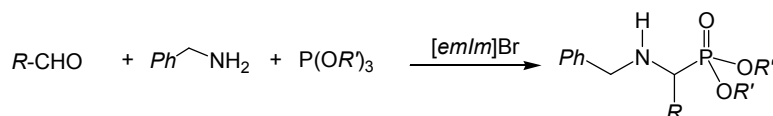
An efficient synthesis of α-aminophosphonates from aldehydes, amines and phosphite in ionic liquids

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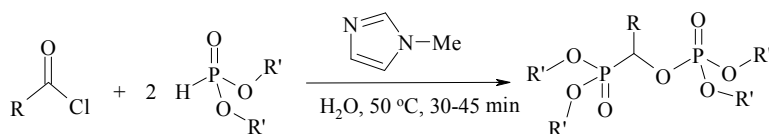


A mild and efficient method for the synthesis of phosphoryloxy phosphonates via one-pot reactions in water

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A facile synthesis and theoretical study of novel stable heterocyclic phosphorus ylides containing 2,4-dimethyl-3-acetyl pyrrole

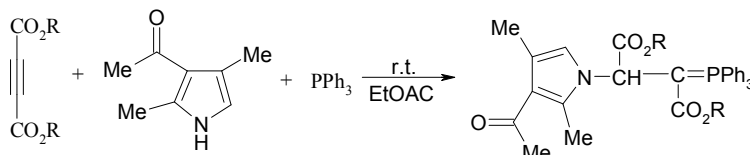
pp 238-243

Sayed Mostafa Habibi-Khorassani,^{a*} Malek Taher Maghsoodlou,^a Ali Ebrahimi,^a Majid Moradian,^b Faramarz Rostami Charati,^c Pouya Karimi^a and Mohammad Amin Kazemian^a

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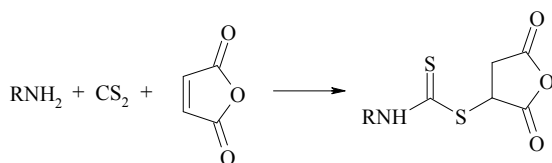
An efficient synthesis of dithiocarbamates from primary amines, CS₂ and maleic anhydride

pp 244-247

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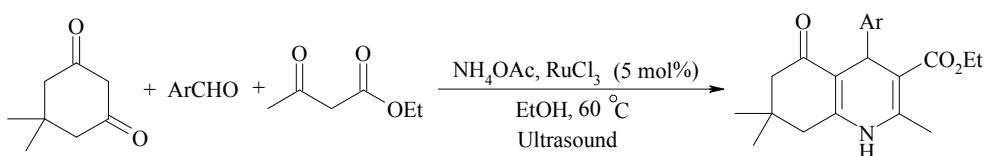


Facile ultrasound promoted one-pot synthesis of polyhydroquinoline derivatives using RuCl₃

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ab initio/DFT calculations ¹³C, ¹H NMR chemical shifts and bond length in synthesized spirooxindol compound

pp 251-254

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Pure spirooxindol was synthesized and studied by both the experimental and calculation methods of NMR and X-ray spectroscopy. Theoretical methods of substantial quality can be used to calculate NMR data using the gauge including atomic orbital (GIAO) method, yielding data comparable with those of the experiment. *ab initio* and DFT calculations of ¹³C and ¹H NMR chemical shifts of the Novel Spirooxindol Compound were reported. The structure of this molecule at first was optimized with the Gaussian 03 program. After the optimization, ¹³C and ¹H chemical shifts were calculated with GIAO method, using corresponding TMS shielding calculated at the same theoretical levels as the reference. Calculations have been performed with using three different basis sets: 6-31G, 6-31G(d,p) and 6-31+G(d,p) at HF and DFT levels of theories. The results, especially for ¹³C chemical shifts are in agreement with the experimental values of NMR. In this work the bond lengths of the Spirooxindol was calculated and the results compared with those of the experimental data obtained by X-Ray crystallography. All the computations were done using an IBM x225 Xeon computer that has 2048 MB ram.

Effect of curvature and chirality for alkanethiols interaction with single-walled carbon nanotubes: *ab initio* investigation

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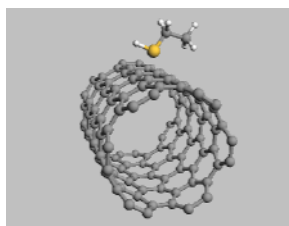
J. Shakhs Emampour,^a M. D. Ganji,^{b,*} S. Mahmoudi,^c M. M. Taghavi,^b M. Shokry^b

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First-principles calculations show that the affinities of ethanethiol molecule for the semiconducting and metallic SWNTs are rather close, about 10% stronger in the former case, and the binding energy of alkanthiols is increased for adsorption on larger-diameter CNTs with lower-curvature while, it is decreased for adsorption on the larger-chiral angle one.

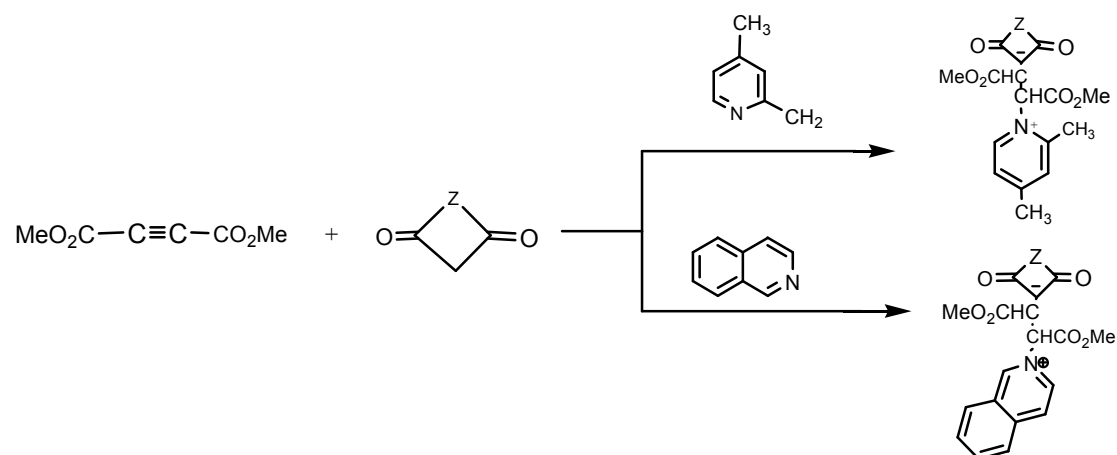


Three component reaction of isoquinoline with strong cyclic CH-acids in presence of dimethylacetylene dicarboxylate

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An easy, safe and simple method for the iodination of heterocyclic compounds in water

pp 267-269

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