

SYNTHESIS, STRUCTURAL, SPECTROSCOPIC AND ELECTROCHEMICAL PROPERTIES OF NOVEL S, O-SUBSTITUTED P-BENZOQUINONES

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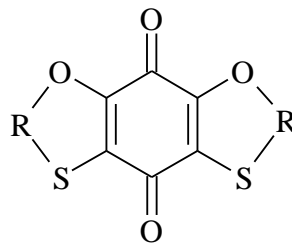
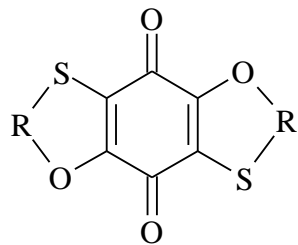
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ABSTRACT

Quinones are naturally occurring compounds with specific characteristics that have a great impact on the living cell. The ability to carry electrons makes them an important component of photosynthetic and respiratory electron transfer chain. They are considered as components of biological electron transfer chains located in the membranes of mitochondria, bacteria and chloroplasts. Quinones are useful compounds for preparation of superconducting materials. Quinones are good electron acceptors and are known to be efficient quenchers of singlet state donor fluorescence of various fluorophores. The current data are consistent with an electron transfer mechanism, and the quenching efficiency is dependent on the redox potentials of the corresponding quinone–hydroquinone system. From the perspectives of designing magnetic materials and understanding photo-physical properties, the co-ordination chemistry of quinones is also very important. The quinones also find application as electrode material. In present study, from the reaction of 2,3,5,6-tetrachloro-1,4-benzoquinone with difunctional thiols were synthesized heterocyclic isomer *p*-benzoquinone compounds. The synthesized compounds were characterized by fourier transform-infrared, proton and carbon nuclear magnetic resonance, mass spectroscopic techniques, as well as elemental analysis and ultraviolet–visible spectra. The synthesized isomer compounds were identified by the carbon nuclear magnetic resonance spectra.



R=-(CH₂)₃-etc

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