Synthesis of Some New Electron π -Donors Containing Methoxy Groups

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The synthesis of some new electron π -donors carrying four or two methoxy groups is described. The precursor 5,6-dimethoxy-5,6-dihydro[1,3]dithiolo[4,5-*b*] [1,4]dithiin-2-thione was synthesized and by coupling reactions the symmetrical 5,6,5',6'-tetramethoxy-5,6,5',6'-tetrahydro-[2,2']bi[[1,3]dithiolo[4,5-b][1,4]dithiinylidene] and unsymmetrical 5,6-dimethoxy-5,6,5',6'-tetrahydro-[2,2']bi[[1,3]dithiolo[4,5–[1,4]dithiinvlidene], 2-(5,6-dimethoxy-5,6-dihydro-[1,3]dithiolo[4,5-b][1,4]dithiin-2-ylidene)-5,6-dihydro-[1,3]dithiolo[4,5-b][1,4]-dioxine and (5,6-dimethoxy-5,6-dihydro-[1,3]dithiolo[4,5-*b*][1,4]dithiin-2-vlidene)-6,7dihydro-5H–[1,3]dithiolo[4,5-b][1,4]dithiepine donors were prepared. They have been characterized spectroscopically and their redox potentials determined using cyclic voltammetry.

Key words: π -Donors, Tetrathiafulvalenes, Cyclic Voltammetry