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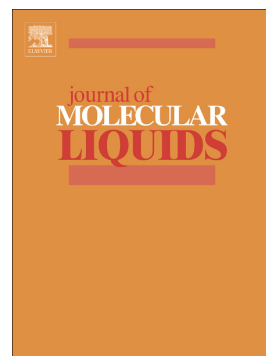
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Low melting oxalic acid/proline mixture as dual solvent/catalyst for efficient synthesis of 13-aryl-13*H*-benzo[*g*]benzothiazolo[2,3-*b*]quinazoline-5,14-diones under microwave irradiation

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ABSTRACT

Oxalic acid and proline based deep eutectic solvent (DES) has been identified as an effective catalyst and environmentally benign reaction medium for one-pot synthesis of 13-aryl-13*H*-benzo[*g*]benzothiazolo[2,3-*b*]quinazoline-5,14-diones via three-component reaction of aromatic aldehydes, 2-aminobenzothiazole and 2-hydroxy-1,4-naphthoquinone under microwave irradiation. The reported approach shows significant advantages such as easy work-up, environment-friendly process, short reaction times, excellent yields, one-pot multicomponent reaction, chromatography-free purification, the recycling and the re-use of the DES.

Keywords:

Deep eutectic solvents, Oxalic acid/proline, Multicomponent reaction, 2-Hydroxy-1,4-naphthoquinone, Aldehydes, 2-aminobenzothiazole, 13-aryl-13*H*-benzo[*g*]benzothiazolo [2,3-*b*]quinazoline-5,14-diones

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