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Ring-Size Effects on structures and properties of benzo-fused dithiazolyl radicals

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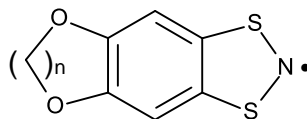
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Mohamad Harb

Sulfur-nitrogen free radicals have been developed in the design of both organic magnets and conductors. Dithiazolyl (DTA) radicals are particularly promising in their application as organic magnets as they tend not to dimerize; it is crucial that they should be studied further for they might have interesting magnetic properties as their unpaired electrons do not spin-pair with neighbouring spins. Yet the synthesis of appropriate DTA radicals has proved synthetically more challenging than other thiazyl radicals. This talk will examine the effects of increasing the ring size ($n = 1 - 3$) on a series of benzo-fused dithiazolyls (**1**). The synthetic methodology, structures and magnetic properties of these derivatives will be discussed.



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