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Synthesis of a New Series of 2-(2-Hydroxynaphthylazo)aryltellurium Compounds

Ali Z. Al-Rubaie, Adil A. Al-Fregi & Shaker A. S. Al-Jadaan

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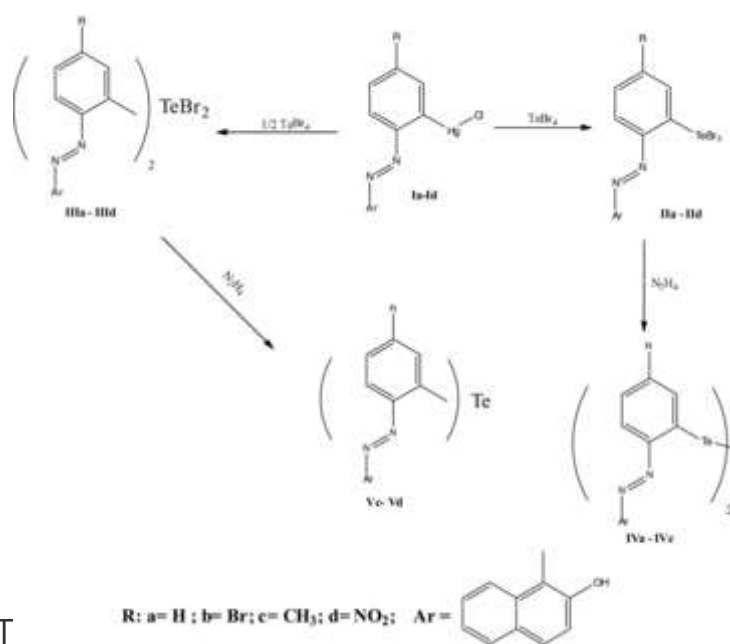
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Abstract

A new series of 2-(2-hydroxynaphthylazo)arylmercury chlorides (**Ia-Ib**) were prepared by azo coupling of diazonium salts of 2-aminophenyl-, 2-amino-5-bromophenyl-, 2-amino-5-methylphenyl-, and 2-amino-5-nitrophenylmercury chlorides with 2-naphthol. Reactions of compounds **Ia-Ib** with tellurium tetrabromide in 1:1 and 2:1 molar ratios in dry dioxane gave 2-(2-hydroxynaphthylazo)aryltellurium tribromides (**IIa-IId**) and bis(2-(2-hydroxynaphthylazo)aryl)tellurium dibromides (**IIIa-IIIc**), respectively, in good yields. Reduction of compounds **IIa-IIc** and **IIIc-IIIc** by ethanolic hydrazine hydrate gave the corresponding ditellurides (**IVa-IVc**) and tellurides (**Vc-Vd**), respectively, in moderate to good yields. Treatment of compounds **IIIb** and **IIIc** with $[Pd(PPh_3)_4]$ in

acetonitrile gave new symmetrical biaryls containing azo groups. All compounds were characterized by spectroscopic data and elemental analysis.



GRAPHICAL ABSTRACT

Keywords: Azo compounds, coupling reactions, mercury(II) chloride, organotellurium compounds, palladium(0)

Additional information

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