Synthesis and characterization of 2,7-dihydro-1H-dinaphtho[c,e] tellurepin: A new heterocyclic telluride

Abstract

Synthesis of the racemic cyclic telluride, i.e., 2,7-dihydro-1H-dinaphtho-[c,e]tellurepin (1), possessing a C2 axis was based on the reaction of 2,2′-bis(bromomethyl)-1,1′-binaphthalene with potassium tellurocyanate in dry DMSO. Reaction of halogens with 1 gave the diiodo (2), dibromo (3) and dichloro (4) derivatives. Treatment of 1 with iodomethane and iodoethane gave the methyl- and ethyl tellurepinium iodides, 5 and 6, respectively.Compound 1 reduced the carbonyl groups in DDQ and TCQ to hydroxyl groups. Mononuclear palladium(II) complex, [(C22H16Te)2PdCl2], was prepared by reaction of 1 with [PdCl2(NCPh)2].All new compounds were characterized by elemental analysis and spectroscopic techniques.