

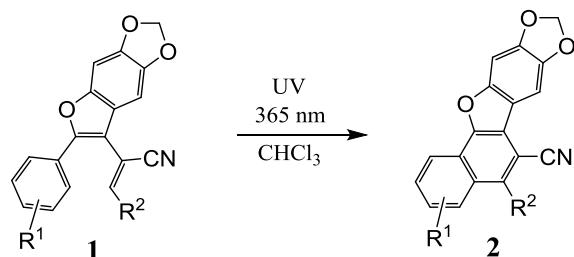
General approach to substituted naphtho[1,2-*b*]benzofurans via photochemical 6 π -electrocyclization of benzofuranyl containing cinnamionitriles

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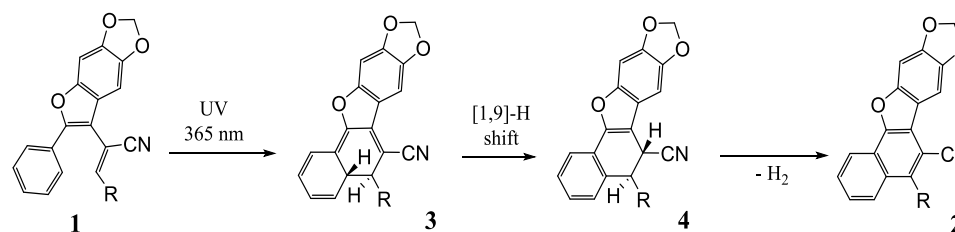
At the first time, we elaborated the method of synthesis of naphtho[1,2-*b*]benzofurans based on photoinduced reaction of acrylonitriles containing 2-arylbzofuran fragment as part of 1,3,5-hexatriene system (Scheme 1).



Scheme 1. General photochemical approach for the synthesis of naphtho[1,2-*b*]benzofurans **2**.

The most efficient conditions for the considered photoreaction were found to be the use of chloroform as solvent for 48 h.

The structures of obtained 5,6-dihydronaphtho[1,2-*b*]benzofuran and one of the target naphtho[1,2-*b*]benzofurans were confirmed by X-ray diffraction.



Scheme 2 Proposed mechanism for photoreaction of **1**.

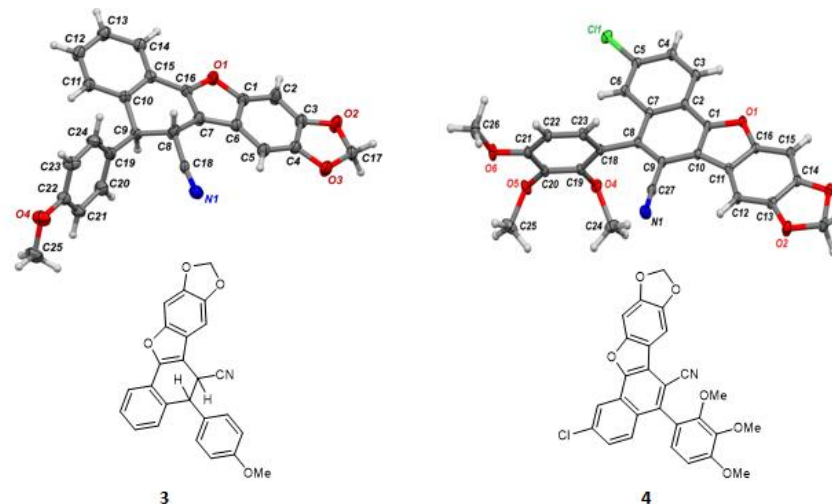


Figure 1. Structure of **3** and **4**.