

Synthesis of 9-iodo-6H-indolo[2,3-b]quinoxaline and its transformations

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There are synthesized 9-iodo-6H-indolo[2,3-b]quinoxaline (Scheme 1) and its N-benzyl products . Their properties in the metal-catalyzed Sonogashira cross-coupling reaction, the interaction of existing halogen products with terminal alkynes such as phenylacetylene, propargylamine and trimethylsilylacetylene are studied. The reaction takes place in the presence of $\text{PdCl}_2(\text{PPh}_3)_2$ and CuI cocatalyst in dimethylformamide (DMF) in the base (Et_3N). Four new substances were obtained: 9-(phenylethynyl)-6H-indolo[2,3-b]quinoxaline, 9-((trimethylsilyl)ethynyl)-6H-indolo[2,3-b]quinoxaline, 6-benzyl-9-(phenylethynyl)-6H-indolo[2,3-b]quinoxaline and 3-((6H-indolo[2,3-b]quinoxalin-9-yl)ethynyl)aniline.

Scheme 1

