A more efficient entry to phenanthridinones

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The presence of the phenanthridinone core in natural products and biologically active compounds has encouraged research on more efficient approaches to such valuable tricyclic framework. Due to the lack of transmetallating agents and the atom-economy implied, palladium-catalyzed direct arylation is an appealing alternative for the ring closure step. However, the relative high amount of the catalyst employed may become a serious drawback from a practical view. In this context, we wish to present the application of a palladacyclic complex to this reaction and the significant reduction of the catalytic amount achieved (0.05 mol%) in the successful preparation of a series of phenanthridinone derivatives.