

Synthesis of Methyl 7-Aryl(hetaryl, cyclohexenyl)-10-(1,3-benzodioxol-5-yl)-8-oxo-7,8,9,10,11,12-hexahydrobenzo[*b*][1,7]phenanthroline-9-carboxylates

N. G. Kozlov and A. B. Tereshko

*Institute of Physical Organic Chemistry, National Academy of Sciences of Belarus,
ul. Surganova 13, Minsk, 220072 Belarus
e-mail: loc@ifoch.bas-net.by*

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Abstract—Three-component condensation of quinolin-5-amine with methyl 2-(1,3-benzodioxol-5-yl)-4,6-dioxocyclohexane-1-carboxylates and aromatic aldehydes (or cyclohex-3-ene-1-carbaldehyde) afforded new hexahydrobenzo[*b*][1,7]phenanthroline derivatives. The condensation in butan-1-ol is strictly regioselective but not stereoselective, so that mixtures of *cis*- and *trans*-isomeric methyl 7-aryl(hetaryl, cyclohexenyl)-10-(1,3-benzodioxol-5-yl)-8-oxo-7,8,9,10,11,12-hexahydrobenzo[*b*][1,7]phenanthroline-9-carboxylates at a ratio of ~40:60% are formed.

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