

# Synthesis of Novel Dihydrothieno- and Thiopyrano Quinolines from 3-Formyl-2-Mercaptoquinoline Derivatives

Zeinab Faghihi, Morteza Shiri, Raziye Pourabed, [Majid M. Heravi](#), Vahideh Zadsirjan

Department of Chemistry, Alzahra University, Vanak, Tehran, Iran

## Abstract

Several new fused polycyclic 2,3-dihydro-thieno[2,3-b]quinolin-3-ol derivatives were synthesis through the un-catalyzed reaction of various 2-mercaptobenzoquinoline-3-carbaldehydes with 2-bromoacetophenones in CH<sub>2</sub>Cl<sub>2</sub> at 80–90% yield. Besides, reaction of differently substituted 3-formyl-2-mercaptoquinolines and various 1,3-dicarbonyl compounds such as dimedone, ethyl acetoacetate and 1,3-indandione) in the presence of AlCl<sub>3</sub> as an efficient catalyst in CH<sub>2</sub>Cl<sub>2</sub> at room temperature gave different novel fused polyheterocycle derivatives depends on the selection of 1,3-dicarbonyl compounds, respectively.

**Keywords:** 2-Bromoacetophenones catalyst-free reaction, dimedone, ethyl acetoacetate, 3-formyl-2-mercaptoquinolines, fused polyheterocycles, 1,3-indandione