2-(Fur-2-yl)thiazolo[4,5-*f*]quinoline: Synthesis and Electrophilic Substitution Reactions

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Abstract—Condensation of quinoline-5-amine with furan-2-carbonyl chloride in propan-2-ol afforded *N*-(5-quinolyl)furan-2-carboxamide, treatment of which with an excess of P_2S_5 in anhydrous pyridine led to the formation of the corresponding thioamide. Oxidation of the latter with potassium ferricyanide in an alkaline medium furnished 2-(fur-2-yl)thiazolo[4,5-*f*]quinoline. A plausible mechanism for its formation was proposed. The reactions of electrophilic substitution (nitration, bromination, formylation, acylation) of the obtained *N*-(5-quinolyl)furan-2-carboxamide were studied.

Keywords: quinoline-5-amine, furan-2-carbonyl chloride, potassium ferricyanide, 2-(fur-2-yl)thiazolo[4,5-*f*]-quinoline, electrophilic substitution reactions

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