amination, deamination

O 0270 37 - 053 Convenient Amination of Weakly Activated Thiophenes, Furans, and Selenophenes in Aqueous Media. — A novel general and facile method for the synthesis of N,N-disubstituted aminofurans, -thiophenes, or -selenophenes is presented involving S_N Ar substitution reaction of the corresponding weakly activated bromo analogues with secondary amines in refluxing water. The reaction mechanism is confirmed by several control experiments. — (PRIM, DAMIEN; KIRSCH, GILBERT; Tetrahedron 55 (1999) 21, 6511-6526; Lab. Chim. Org., Groupe Synth. Org. Heterocycl., Univ. Metz, F-57045 Metz, Fr.; EN)

$$\begin{array}{c} \text{Br} & \text{3 equiv. HN} \\ \text{R}^{2} \\ \text{III} & \text{H}_{2}^{0}\text{, reflux} \\ \text{III} & \text{R}^{2} \\ \text{III} & \text{R}^{2} \\ \text{R}^{1} : -\text{CHO} ; R^{2} - R^{3} : 0 \\ \text{R}^{2} : -\text{CHO} ; R^{2} - R^{3} : 0 \\ \text{R}^{1} : -\text{CHO} ; R^{2} - R^{3} : 0 \\ \text{R}^{1} : -\text{CO-Me} ; R^{2} : R^{3} : -\text{Ph} \\ \text{R}^{2} : -\text{CO-Me} : R^{2} - R^{3} : 0 \\ \text{R}^{3} : -\text{CO-Me} : R^{2} : 0 \\ \text{R}^{3} : -\text{CO-Me} : R^$$