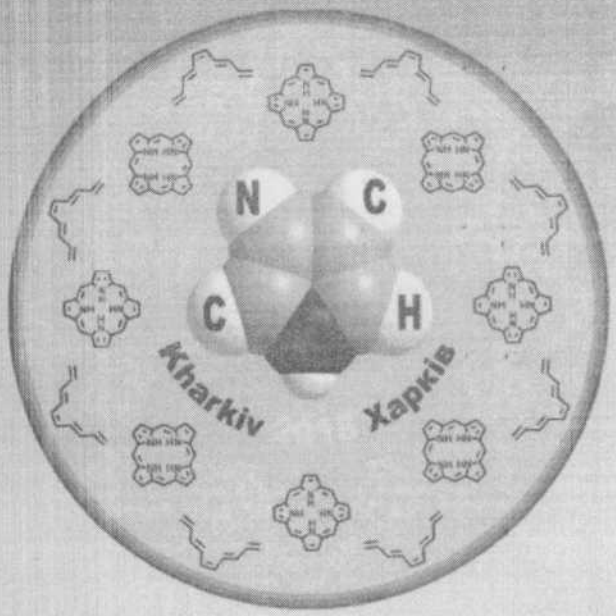
8th International Conference

"CHEMISTRY OF NITROGEN CONTAINING HETEROCYCLES"

in memoriam of Prof. Valeriy Orlov



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Book of Abstracts

ARYLGLYOXALS AS KEY PRECURSORS FOR THE SYNTHESIS OF ARYL(INDOL-3-YL)BENZOINS, ARYL(FUR-2-YL)BENZOINS, 5-ARYLTHIOHYDANTOINS, N-HYDROXYHYDANTOINS AND N-ALKOXYHYDANTOINS

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Arylglyoxals easily reacts with indole (in PhH or CH_2Cl_2 at r.t.; or in boiling AcOH, PhMe,), yielding α-aryl(indol-3-yl)benzoins **1**. Some of them were isomerized into ß-aryl(indol-3-yl)benzoins **2** by action of bases (B = Et_3N, EtONa). The observed substantial's differences is in NMR and MS spectra of isomers **1** and **2** yield strict criteria for it structure determination. Arylglyoxals interaction with 2-methylfuran and with N,N-dimethylhydrazone of 2-furanecarbaldehyde (CH_2Cl_2 or AcOH, r.t.) yields the proper α-aryl(fur-2-yl)benzoins **3** and **4**. Some of α-benzoins **4** are unstable at the room temperature and readily spontaneously isomerizes in more stable ß-aryl(fur-2-yl)benzoins **5**. With thiourea, N-hydroxyurea and N-alkoxyureas arylglyoxals selectively form (in AcOH, r.t.) 5-arylthiohydantoins **6**, 3-hydroxy-5-arylhydantoins **7** and 3-alkoxy-5-arylhydantoins **8**, respectively.