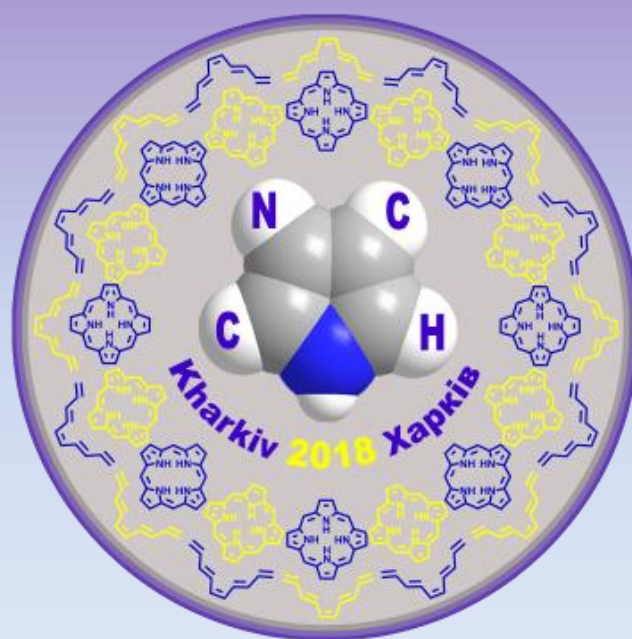


8th International Conference

**“CHEMISTRY OF NITROGEN
CONTAINING HETEROCYCLES”
in memoriam of Prof. Valeriy Orlov**



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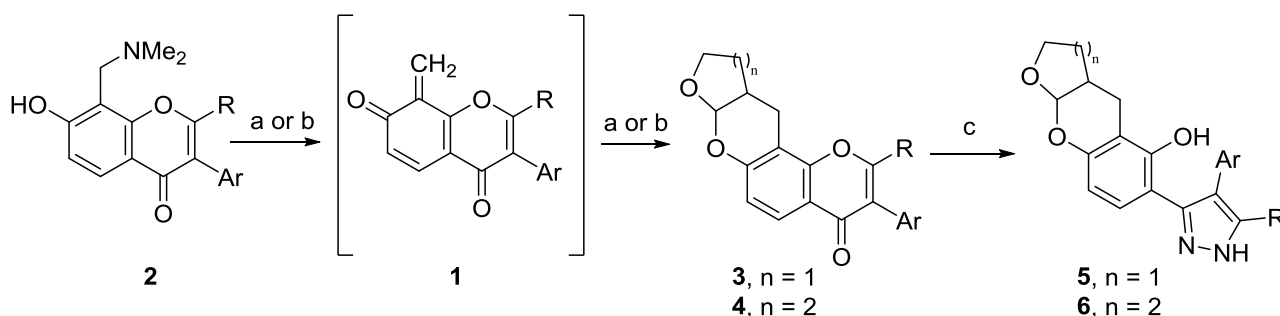
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SYNTHESIS OF PYRAZOLE-CONTAINING XYLOKETAL-LIKE COMPOUNDS

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It is known, that a large variety of new bioactive compounds been isolated from marine fungi has recently. Unique metabolites named xyloketal A – H^[1] and alboatrin^[2] which containing fused bezopyran and furan rings with acetal function were Isolated from mangrove fungus *Xylaria* sp. The biosynthesis and chemical syntheses of these and related compounds are based on inverse-electron-demand Diels-Alder reaction.



a) 2,3-dihydrofuran, DMF, reflux; 24-40 h; b) 3,4-dihydro-2*H*-pyran, DMF, reflux; 36-40h;
c) N₂H₄, EtOH, reflux; 0.5-2 h.

We developed synthesis of pyrazole derivatives of 2,3,3a,9a-tetrahydro-4*H*-furo[2,3-*b*]chromene heterocyclic system which presents in natural acetals. Interaction of thermally generated ortho-quinone methides **1** from isoflavone Mannich bases **2** with 2,3-dihydrofuran or 3,4-dihydro-2*H*-pyran led to formation fused acetals **3,4**. Selective cleavage of pyranone ring compounds **3,4** by hydrazine treatment led to the formation of xylokeketal-like-pyrazole hybrids **5,6**.

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