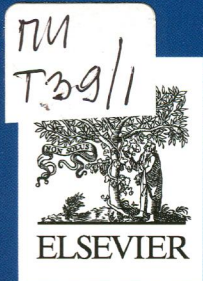


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# Tetrahedron Letters

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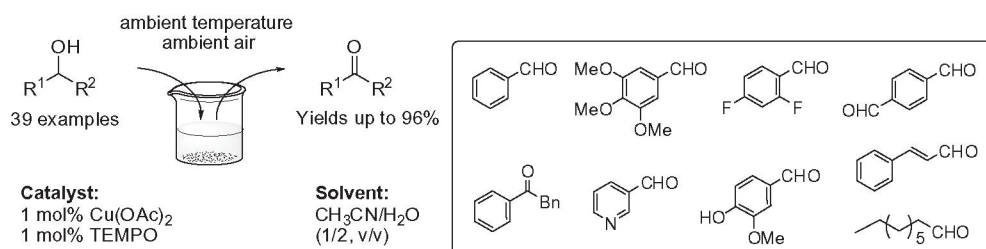
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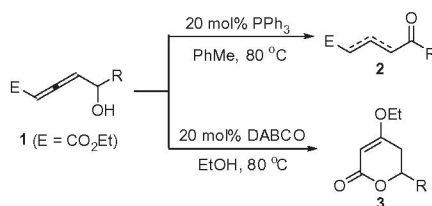
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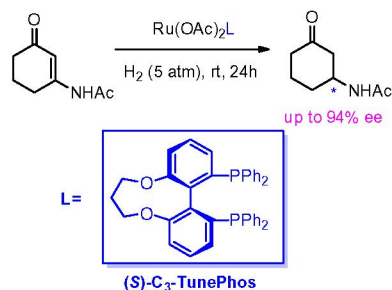
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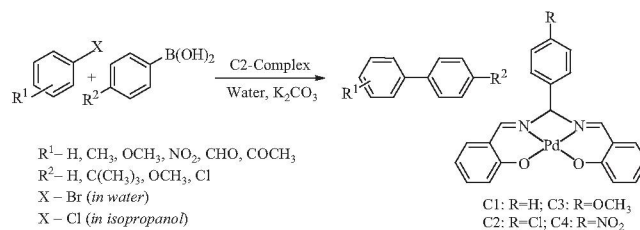
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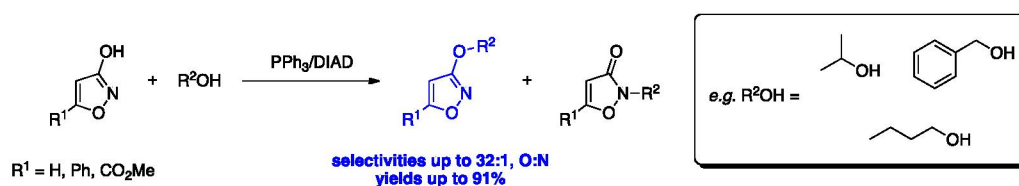
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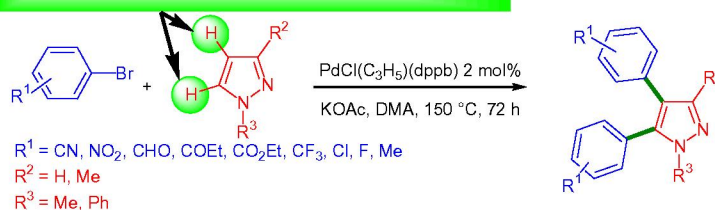


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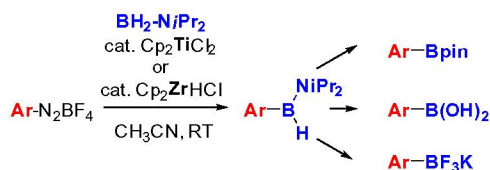
The similar reactivity of C4 and C5 C-H bonds of pyrazoles allows a one step access to 4,5-diarylpzazoles



## Borylation using group IV metallocene under mild conditions

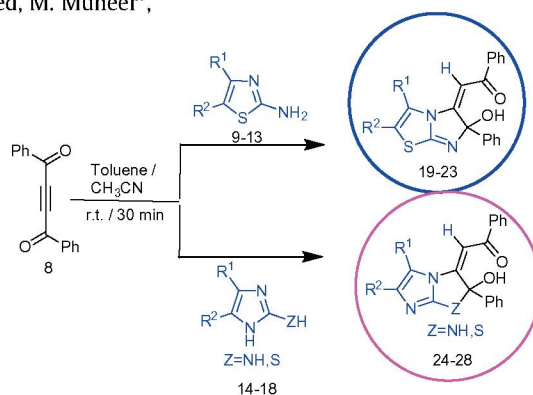
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Ludovic D. Marciasini, Michel Vaultier, Mathieu Pucheault\*

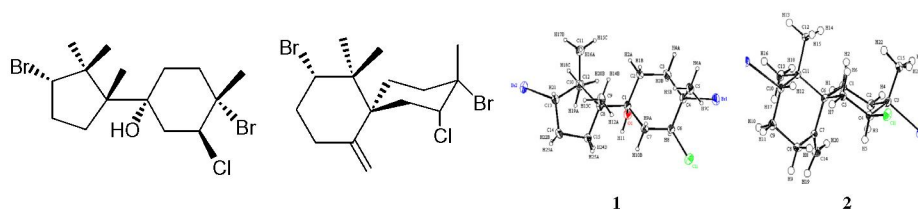


**One pot synthesis of imidazo[2,1-b]thiazoles and benzo[d]thiazolo[3,2-a]imidazoles**

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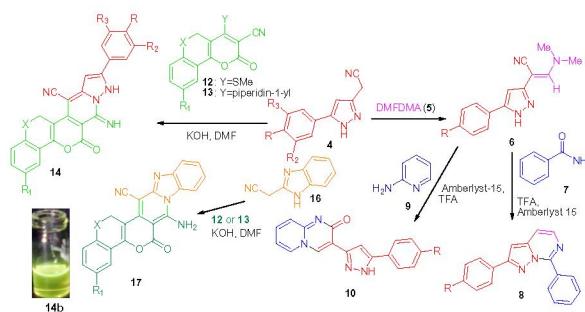
Niyaz A. Mir, Tariq A. Shah, Sarfaraz Ahmed, M. Muneer\*,  
Nigam P. Rath, Musheer Ahmad**New cytotoxic halogenated sesquiterpenes from the Egyptian sea hare, *Aplysia oculifera***

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Mohamed-Elamir F. Hegazy\*, Alaa Y. Moustfa, Abou El-Hamd H. Mohamed, Montaser A. Alhammady, Serag Eldin I. Elbehairi,  
Shinji Ohta, Paul W. Paré**A carbanion induced synthesis of highly congested pyrazole and imidazole containing heterocycles**

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Hardesh K. Maurya, Atul Gupta\*

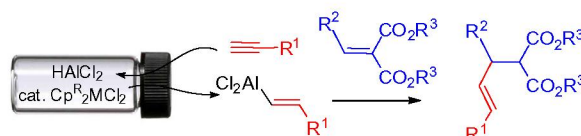


An efficient approach to the synthesis of highly congested di, penta and hexacyclic pyrazoles as well as imidazole fragment containing novel heterocyclic molecule has been developed through a carbanion induced transformation of suitably functionalized 2*H*-pyran-2-ones, benzo[*h*]chromene and thiochromeno[4,3-*b*]pyrans. Due to the presence of fluorescence, we report their prime application as metal sensor.

**Assessing the utility of HAICl<sub>2</sub> derived vinylalanes for Michael addition**

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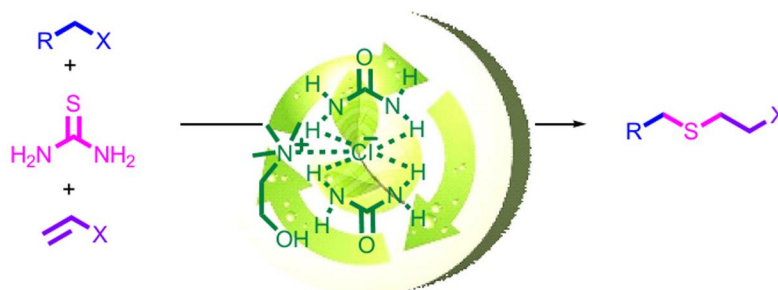
Darren Willcox, Humaira Gondal, Marc Garcia Civit, Simon Woodward\*



**An atom-economic and odorless thia-Michael addition in a deep eutectic solvent**

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Najmedin Azizi\*, Zahra Yadollahy, Amin Rahimzadeh-Oskooee

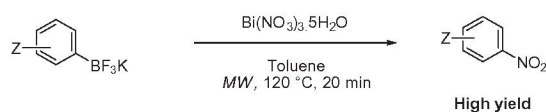


The first 100% atom-efficient and odorless protocol for carbon–sulfur bond formation in a deep eutectic solvent (DES) as both the reaction medium and catalyst is reported.

**Catalyst free, base free microwave irradiated synthesis of aryl nitrites from potassium aryltrifluoroborates and bismuth nitrate**

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Mohammad Al-Masum\*, Rebecca L. Welch

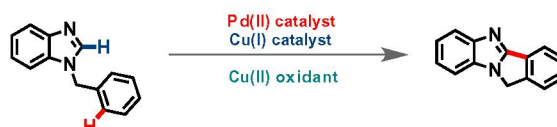


When a mixture of equimolar amount of potassium aryltrifluoroborate and bismuth nitrate pentahydrate in toluene is microwaved without adding any metal catalyst or base at 120 °C for 20 min, aryl nitrite is formed in high yield.

**Intramolecular arylation of benzimidazoles via Pd(II)/Cu(I) catalyzed cross-dehydrogenative coupling**

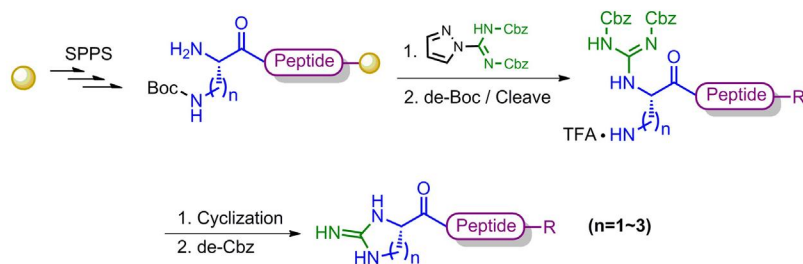
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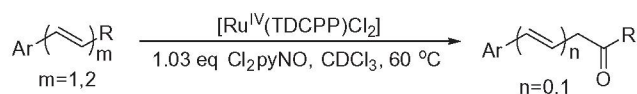
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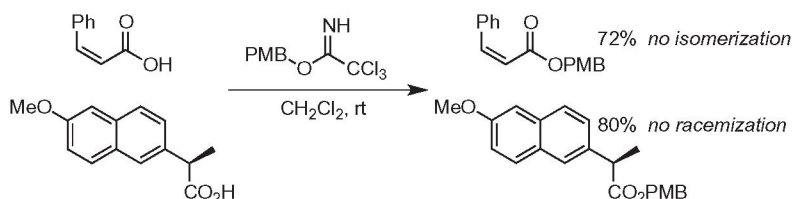
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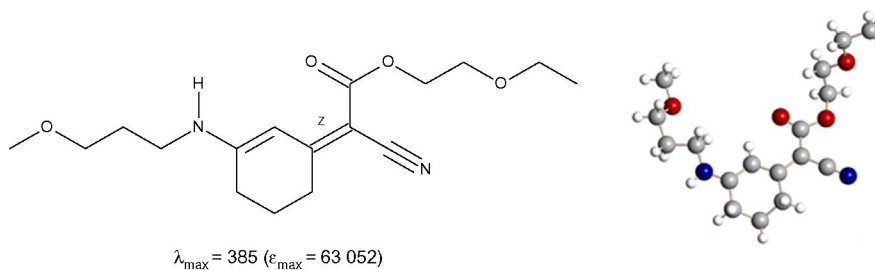
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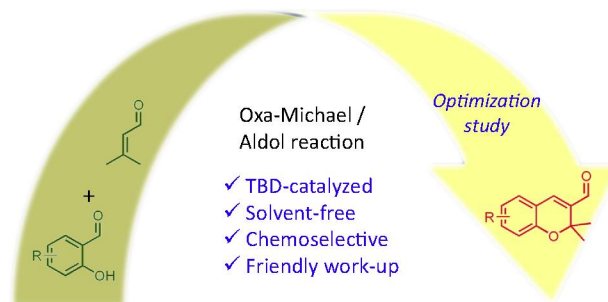
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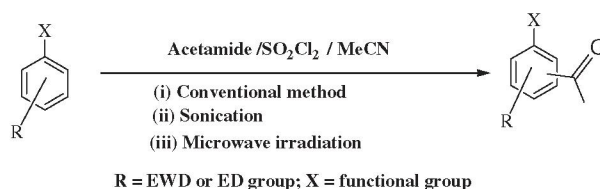
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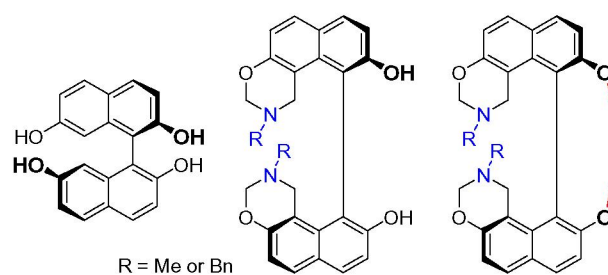
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Mukka Satish Kumar, Kamatala Chinna Rajanna\*, Purugula Venkanna, Marri Venkateswarlu

**Synthesis of enantiomerically pure helicene like bis-oxazines from atropisomeric 7,7'-dihydroxy BINOL: preliminary measurements of the circularly polarized luminescence**

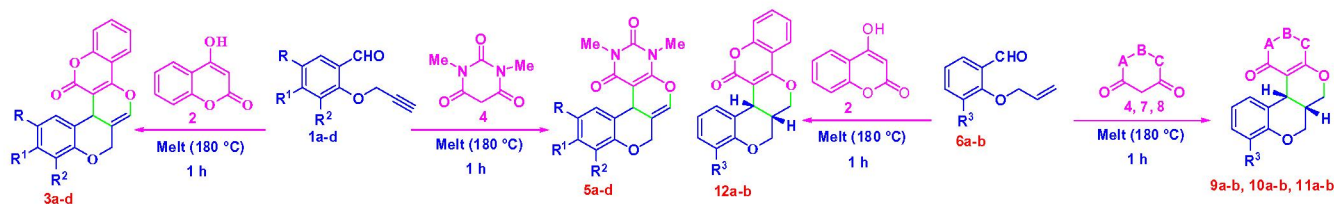
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M. Shyam Sundar, Harish R. Talele, Hemant M. Mande, Ashutosh V. Bedekar\*, Roberto C. Tovar, Gilles Muller\*

**Highly stereo and chemoselective synthesis of tetra and pentacyclic frameworks using Solid-State Melt Reaction (SSMR)**

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Manickam Bakthadoss\*, Govindan Sivakumar



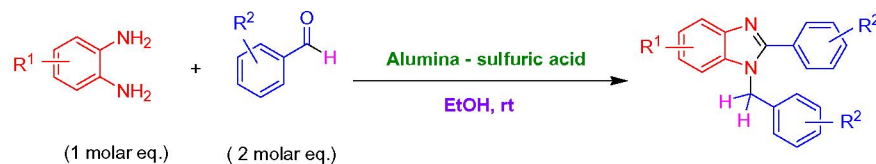
Benzopyran fused tetra and pentacyclic frameworks have been synthesized by the domino Knoevenagel hetero Diels–Alder (DKHDA) reaction using various 1,3-diones with *O*-allylated salicylaldehydes and *O*-propargylated salicylaldehydes in a solvent and catalyst free condition via Solid-State Melt Reaction (SSMR). The reaction requires only a single step operation thus providing potentially bioactive polycyclic heterocycles in high yields.



**Eco-friendly synthesis of 2-aryl-1-arylmethyl-1H-benzimidazoles using alumina-sulfuric acid as a heterogeneous reusable catalyst**

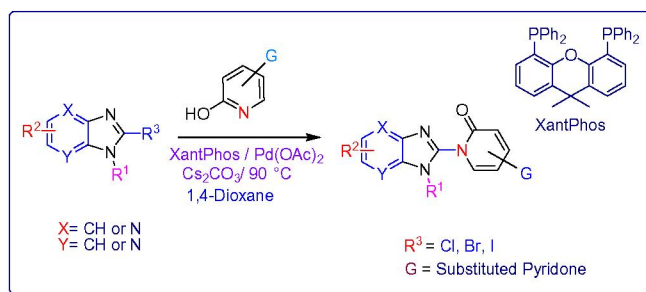
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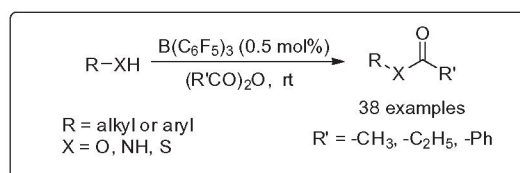
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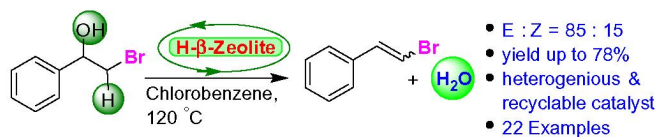




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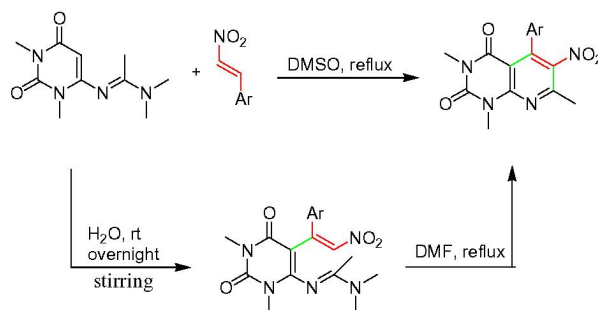
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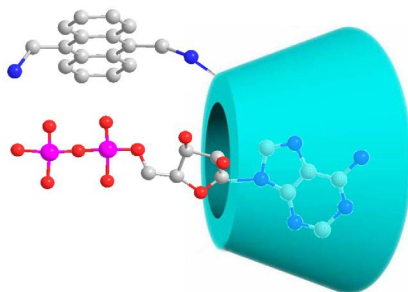
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Lakhinath Saikia, Babulal Das, Pranjal Bharali, Ashim Jyoti Thakur\*

**An anthracene-modified  $\beta$ -cyclodextrin that distinguishes adenosine phosphates fluorescently**

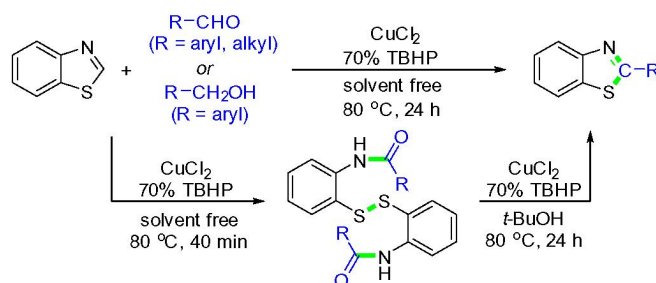
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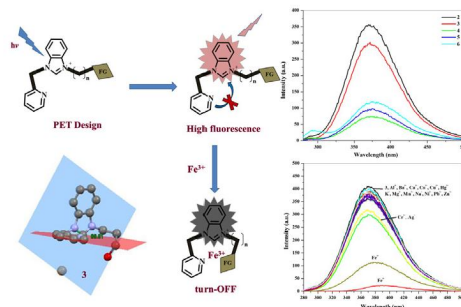
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Mingliang Zhang, Wen-Ting Lu, Wenqing Ruan, Hui-Jun Zhang\*, Ting-Bin Wen\*



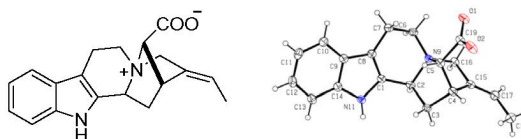
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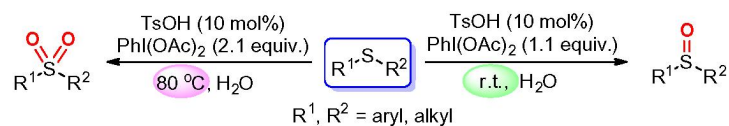
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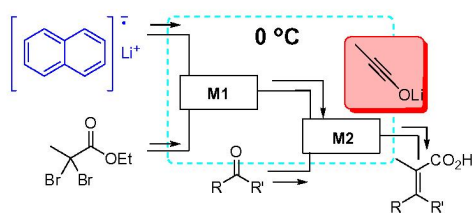
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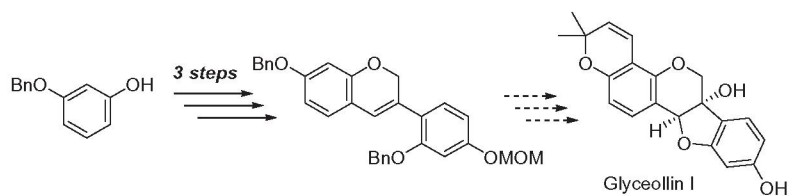
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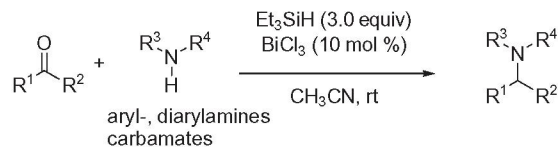
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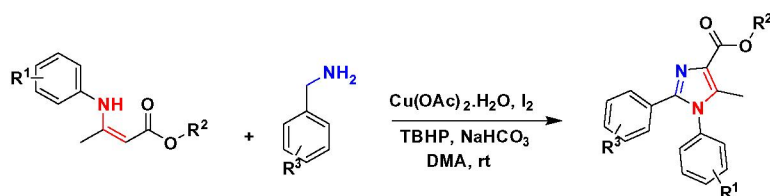
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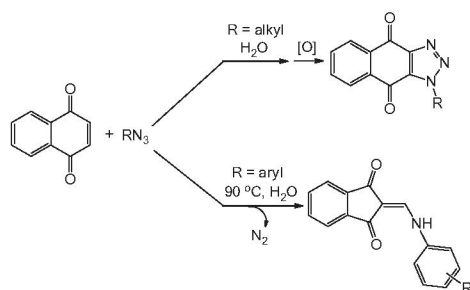
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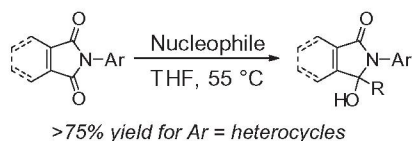
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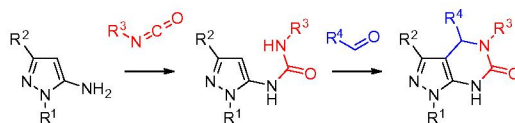
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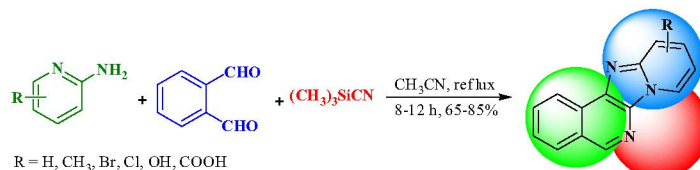
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Sergey V. Ryabukhin\*, Dmitry S. Granat, Andrey S. Plaskon, Alexander Shivanyuk, Oleg Lukin

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Ali Maleki\*, Ali Hossein Rezayan



\*Corresponding author

Supplementary data available via ScienceDirect

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