Poster Presentations

Poster 118.

Rh(III)-Catalyzed Annulation of Cyclic N-Acyl Ketimines with Activated Olefins: Anticancer of Spiroisoindolinones

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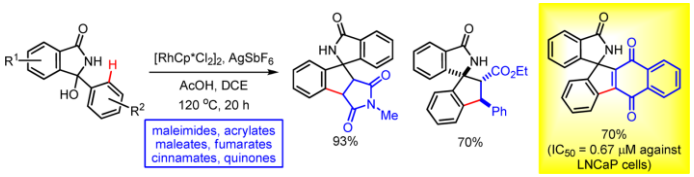

Isoindolinones are among the most interesting class of nitrogencontaining heterocycles, as they are found in various natural products and biologically active compounds. Among those, spiroisoindolinones also have their own importance as they exhibit various properties such as aldose reductase inhibition or can act as chemical sensors. imines have been utilized for the [3 + 2] cyclization reaction to provide aminoindanes or aminoindenes under transition-metal catalysis. In this context, cyclic imines are of prime importance as they could lead to the formation of spirocompounds via a [3 + 2] annulation reaction. In particular, a number of reactions have been carried out on cyclic N-sulfonylketimines under various transition-metal catalysts. Herein, we report the [3 + 2] annulation reaction between cyclic N-acyl ketimines generated in situ by the dehydration of 3-aryl-3-hydroxyisoindolin- 1-ones and activated olefins for the formation of various spiroisoindolinone frameworks. Furthermore, the synthesized spiroisoindolinones have been evaluated for the cytotoxic effect against androgen-sensitive human prostate adenocarcinoma cells (LNCaP), human prostate adenocarcinoma cells (DU145), human endometrial adenocarcinoma cells (Ishikawa), human breast cancer cell (MCF-7), and triple negative human breast cancer cells (MDA-MB-231).

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Poster 119.

A New Generation of Diimine Ligands with Tunable Photophysical Behavior and Their Rhenium(I) Complexes

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The luminescent transition metal complexes represent a versatile class of photofunctional materials. One strategy to attain new optical properties involves combining organic chromophores with inorganic motifs that requires properly designed and tunable ligand systems [1].

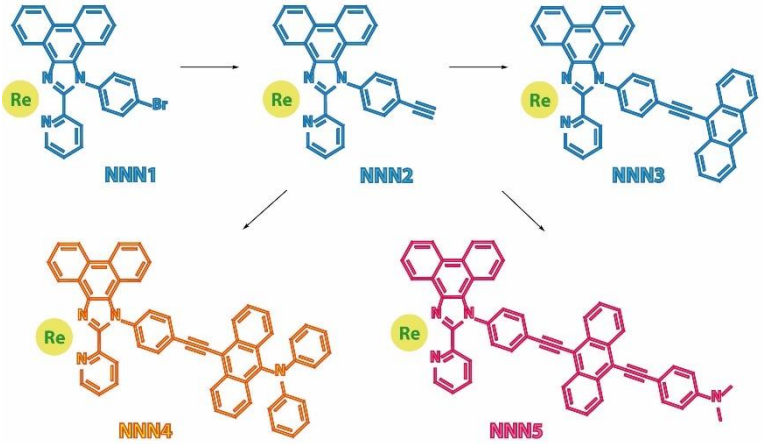

Figure 1. Schematic representation of the luminescent compounds

Using a rational preparative approach, we have synthesized a novel family of highly luminescent N-heterocyclic ligands, which emit from blue to red and demonstrate significant solvatochromism. Also, the ligands were successfully merged with Re tricarbonyl motifs to perturb the electronic features of organic π-chromophores.

[1] F.N. Castellano, Acc. Chem. Res. 2015, 48, 828−839

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