

## Novel transition metal-catalyzed methods for synthesis and functionalization of arenes and heteroarenes

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場所:南7号館7階セミナー室

Prof. Gevorgyan has developed a set of novel efficient transition metal-catalyzed methodologies for synthesis of multisubstituted carboand heterocycles. Commonly, regioselective synthesis of carbo- and heterocycles possessing various functional groups is not a trivial task. He has shown, however, that incorporation of migrating step(s) in the cyclization cascade often helps solving this problem. Thus, it was found that in the presence of Cu-, Ag-, and Au catalysts, a number of groups, such as Hal-, RS-, AcO-, TsO-, Ar-, and SiR<sub>3</sub> could undergo 1,2- or 1,3-migration, or in some cases even double migration, which allows for expeditious synthesis of densely-functionalized carbo- and heterocycles, which are not easily accessible via existing techniques.

He has also explored a direct Pd-catalyzed C-H functionalization approach toward synthesis of multisubstituted aromatic and heteroaromatic molecules. The details will be presented.

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