



## 8<sup>th</sup> ICGC 2018 Session:

### Green Organic Transformations in Water with Heterogeneous Catalysts

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#### Abstract:

A series of amphiphilic polymer-supported transition metal catalysts were developed with a view to use them in greener organic chemical processes which are carried out in water under recyclable conditions. Amphiphilic polymer resin-supported complexes of Pd, Rh, etc. were designed and prepared which catalyzed Suzuki-Miyaura coupling, Heck reaction, Buchwald-Hartwig reaction, etc. in water with catalyst turn over of  $10^2$ - $10^8$  (at a mol ppb level loading).<sup>1</sup> Amphiphilic resin dispersion of nanoparticles of Pd and Pt were also developed to achieve aerobic oxidation of alcohols and hydrogenation of carbonyls.<sup>2</sup> Development of continuous flow reaction systems as well as asymmetric C-C bond forming catalysis in water by use of polymeric catalysts will also be presented.<sup>3</sup>

#### References: (if applicable)

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