PhD Studentship - Organic and Organometallic Chemistry

Project: NHC Ligand Development

Applications are invited for **a Ph.D. studentship** available to start in **Fall 2022** at the Department of Chemistry at Rutgers University, Newark, USA working on *Ligand Design & Transition Metal Catalysis* under the supervision of **Prof. Michal Szostak**.

Send your **CV**, together with a **covering letter** and contact details of **three** academic referees to Prof. Szostak at michal.szostak@rutgers.edu ***TOEFL scores are required for application.*** Candidates with high **TOEL (initial score around 90)** will receive preference. **IELTS scores (6.0 or higher)** can be used instead of TOEFL. Applications from candidates **with *Masters degree* in organic synthesis and organometallic chemistry** are preferred. ***Please, send your application as soon as possible for full consideration.*** Candidates who have already published research papers will receive preference.

The studentship covers fees and an annual stipend. For some background information on recent work by Prof. Szostak see: (check http://szostakgroup.com/publications)

-*J. Am. Chem. Soc.* **2015**, *137*, 14473 (*the first graphene-catalyzed alkylation*)
-*Angew. Chem. Int. Ed.* **2015**, *54*, 14518*. (the first Heck reaction of amides).*
-*Angew. Chem. Int. Ed.*, **2016** *55*, 6959. *(the first biaryl coupling of amides)*.
-*ACS Catal.* **2016**, *6*, 4755. *(Ru-catalysis, one of the most accessed papers in ACS Catal.)*
-*ACS Catal.* **2016**, *6*, 7335. *(Cooperative catalysis, Highlighted in Synfacts, **2017**, 13, 84)*
-*Chem. Sci.* **2017**, *8*, 6525*. (the first RT amide and ester activation)*
-*Angew. Chem. Int. Ed.* **2017**, *56*, 12718*. (the first phosphorylation of amides, Hot Paper).*
-*J. Am. Chem. Soc.* **2018**, *140*, 727 (*the first fully twisted acyclic twisted amides*)
-*Acc. Chem. Res.* **2018**, *51*, 2589*. (personal account of N-C and O-C activation).*
-*Angew. Chem. Int. Ed.* **2018**, *57*, 16721. *(decarbonylative borylation of carboxylic acids).*
-*Chem. Sci.* **2019**, *10*, 9865. *(the first Pd-catalyzed biaryl Suzuki coupling of amides).*
-*J. Am. Chem. Soc.* **2019**, *141*, 11161*. (N-C and O-C activation in unactivated amides/esters).*
-*Chem. Rev.* **2020**, *120*, 1981*. (the first account of NHC ligands in C-H activation).*
-*Trends Chem.* **2020**, *2*, 914. *(review of N-C amide bond activation).*
-*Chem. Rev.* **2021**, *121*, 12746 (*review on twisted amides*)
-*Angew. Chem. Int. Ed.* **2021**, *60*, 10690 (*bimetallic C-O/C-H decarbonylative activation*)
-*Chem. Sci.* **2021**, *12*, 10583 (*IPr# ligands for transition-metal-catalysis*)

The Chemistry Department at The State University of New Jersey, features state-of-the-art facilities and equipment (http://chemistry.rutgers.edu/), and is located in a vibrant Newark campus at the heart of metropolitan New York area (**15 min to Manhattan and Newark airport**). The Szostak labs are located in a **brand-new LSC-II building** (https://www.newark.rutgers.edu/tags/lsc-ii).

Prof. Michal Szostak http://chemistry.rutgers.edu/szostak/
Webpage: http://szostakgroup.com/
Catalysts: https://www.sigmaaldrich.com/US/en/product/aldrich/915653
www.sigmaaldrich.com/US/en/product/aldrich/915912?context=product
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