

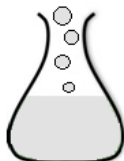


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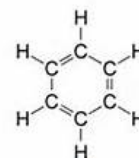
The New York American Chemical Society

Proudly presents



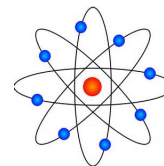
Dr. Fabiola Barrios-Landeros.

Professor Yeshiva College



Title of Talk: “Copper-Promoted Aromatic Acyloxylation”

Synopsis: Cross-coupling reactions catalyzed by transition metals have revolutionized the field of organic synthesis. The functionalization of aromatic rings can be achieved using a large variety of nucleophiles to form C-C or C-heteroatom bonds. However, carboxylic acids have rarely been used as coupling partners. We have identified reaction conditions to successfully couple aryl halides with aliphatic and aromatic carboxylic acids using salts of copper(I) and copper (II). This system offers an alternative to the traditional Fischer esterification method which requires phenol as starting material. It also offers a one-step strategy for the synthesis of protected phenols from aryl halides. The reaction progress has been monitored to better understand the reaction mechanism; product mixtures from crossover experiments have been analyzed to understand the active intermediate species. The experimental evidence is consistent with a catalytic cycle where transmetalation of carboxylate to the Cu(I) salt is the first step, followed by oxidative addition to break the C-X bond, and reductive elimination to form the C-O aromatic bond. Halide exchange, via an aromatic Finkelstein reaction, also takes place under the reaction conditions.



When: Thursday, April 6th, 2017

Where: Queensborough Community College, Science Building Rm S-112

Time: 5:30 p.m. – Social w/ Light Refreshments; 6:00 pm – Seminar Start

Directions: <http://www.qcc.cuny.edu/about/driving.html>

After Seminar Dinner: At a nearby restaurant, \$25 per person.



American Chemical Society Long Island Subsection

http://www.newyorkacs.org/sub_island.php