

## C-H Activation

H. Wang, G. Tang, X. Li\* 13049 – 13052



Rhodium(III)-Catalyzed Amidation of Unactivated C(sp³)—H Bonds

DG CH<sub>3</sub> + O RT to 80 °C DG CH<sub>2</sub> RT

**Rhodium(III)** catalysts can effect the mild amidation of a broad scope of methyl and methylene C(sp³)—H bonds. Quinoline and oxime ether directing groups (DGs)

facilitate the reaction with high efficiency by using 3-substituted 1,4,2-dioxazol-5ones as the amide source.

## **Chiral Polymerization**

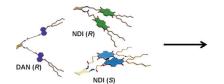
B. Narayan, K. K. Bejagam,

S. Balasubramanian,

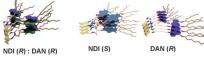
S. J. George\* \_\_\_\_\_ 13053 – 13057



Autoresolution of Segregated and Mixed p-n Stacks by Stereoselective Supramolecular Polymerization in Solution



**Chiral stacking**: A chirality-driven selfsorting strategy has been introduced for the construction of mixed and segregated



Chirality Driven Self-Sorting

donor-acceptor supramolecular arrays in solution.

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## Flashback: 50 Years Ago ...

The preparation of new elements by bombarding samples with heavy ions was a field that had already taken off: neptunium (atomic number 93) was first reported in 1940, and elements with atomic numbers 102, 103, and 104 were reported in 1957, 1961, and 1964, respectively. In a Review, C. Keller discussed the synthesis of transcurium elements. He postulated "...the next few years may witness the discovery of isotopes of elements up to atomic number 109 ...". He was certainly correct: element 109 (meitnerium) was first created in 1982.

Hellmut Bredereck, Rolf Gleiter, and co-workers published two Communications. The first report was on the reactions of N,N-disubstituted formamides with alkali metals, which proceeded with the evolution of hydrogen to form the metal formamide. The salt then either decomposed with loss of carbon monoxide to form the metal dialkylamide, or reacted with the starting formamide to produce the salt of the substituted glyoxylamide. The second report described the reaction of N,N-dimethyl-3dimethylaminoprop-1-enylideneammonium salts. Treatment with potassium methoxide resulted in the formation of N,N,N',N'-tetramethyl-1-propene-1,3diamine, and treatment with sodium dimethylamide resulted in the formation of *N*,*N*,*N'*,*N''*,*N''*,*N'''*,*N'''*-hexamethyl-3-propene-1,1,3-triamine. Reaction of these products with CH-acidic compounds resulted in the formation of butadiene derivatives.

Adolf Krebs outlined the occurrence of 1,2-didehydrocyclooctatetraene as an intermediate in the reaction of bromocyclooctatetraene with potassium *tert*-butoxide. The presence of the intermediate was confirmed by identifying the products of trapping experiments.

Read more in Issue 11/1965.