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Arylation of weakly acidic C–H's

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The seminar will outline a variety of new C-C and C-S bond forming reactions catalyzed by palladium complexes that involve *in situ* formation of the organometallic component via deprotonation of weakly acidic hydrogens (pKa as high as 35!) under catalytic cross-coupling conditions. Substrates discussed will include diarylmethanes, sulfoxides, sulfones, phosphonates, phosphine oxides, amides and several other functional groups. This approach saves resources by avoiding use of prefunctionalized organometallic coupling partners.

Biography

Patrick J Walsh received his BA from UC San Diego (1986) and PhD in Chemistry at UC Berkeley with Prof. Robert G. Bergman (PhD, 1991). He was an NSF postdoctoral fellow with Prof. K B Sharpless at the Scripps Research Institute. Moving across town from 1994-1999, he was an Assistant Professor at San Diego State University and also professor at Centro de Graduados e Investigación, Instituto Tecnológico de Tijuana, Mexico (1996-1999). In 1999, he moved to the University of Pennsylvania where he was promoted to associate professor in 2002, professor in 2005, and to the Alan G. Mac Diarmid Professor of Chemistry in 2008. His interests are in asymmetric catalysis, development of new synthetic methods, reaction mechanisms, and inorganic synthesis. With Prof. Marisa Kozlowski, he has coauthored "*Fundamentals of Asymmetric Catalysis*" (University Science Books, 2008). His outreach program has resulted in over 19 publications with Mexican scientists.

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