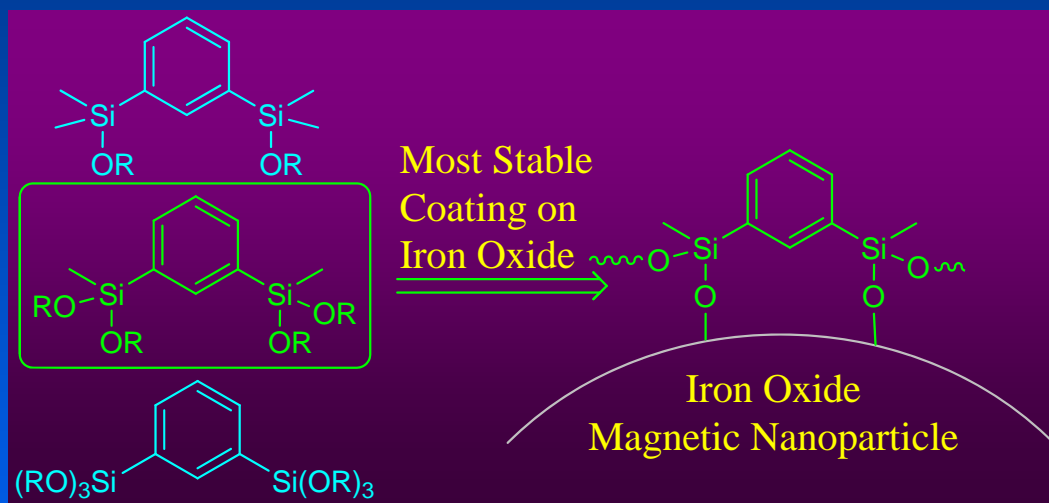


# Synthesis and Development of Novel Bis-Siloxy Arenes for Functionalized Magnetic Nanoparticles

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Organosilane coatings for metal oxides such as silicates or iron oxides are important for a myriad applications. Prior to this work, only a single siloxane was used for this class of coatings. Significantly more stable coatings have been found using bis-siloxy functional coatings. Furthermore, siloxanes can provide up to 3 condensable groups which can bond and crosslink to the desired surfaces. Surprisingly, coatings formed with bis-siloxane compounds with 2 condensable groups (compound in green in the figure) gave the most stable coatings under hydrolysis conditions.