Dr.Andreana Group Meeting: Mechanism Solving

(credit: Dr. Evans CCB problem sets)

Problem set - VINOD (May 18 2018)

Problem-1:

$$\begin{array}{c|c}
\hline
\text{LiN}(i\text{-Pr})_2 \\
\hline
\text{Me}_3\text{SiH} \\
\hline
\text{SiMe}_2\text{R} \\
\hline
\text{H during quench}
\end{array}$$

Takeda and co-workers Org. Lett. 2000, 2, 1903

Problem-2:

The reaction illustrated below was recently reported by Snider and co-workers (Org. Lett. 2001, *123*, 569-572). Where sterochemical issues are present, provide clear three dimensional drawings to support your answer.

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Problem set - ANDHINA (May 18 2018)

Problem-1:

West provided several examples of an one-flask annulation reaction that provides bridged bicyclic products with high diastereoselectivity and yield (F.G.West JACS 1997, 119, 2066). Provide a plausible mechanism.

Problem-2:

The following pyridine synthesis has been reported by Tohda (Bull. Chem. Soc. Jpn. 1990, 63, 2820-2827). Provide a plausible mechanism for this complex transformation.

<u>Hint</u>: To begin to solve a problem of this type, orient the two reacting components in such a fashion that they mirror their orientation in the observed product.