Joint Group Meeting  
(Jan 30, 2014)

1. Explain the formation of the aldehyde 2 on treatment of the ether 1 with KH.

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\text{1. } \text{Explain the formation of the aldehyde 2 on treatment of the ether 1 with KH.}
\]

\[
\begin{align*}
\text{OCH} & \quad \text{KH} \\
\text{1} & \quad \text{18-crown-6, THF} \\
& \quad \text{2}
\end{align*}
\]

2. Identify the structure of 3 and predict a suitable mechanism for the formation of 4.

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\]

\[
\begin{align*}
\text{OH} & \quad \text{HCHO (aq.)} \\
\text{NHBn} & \quad \text{CSA, Na}_2\text{SO}_4 \\
\text{3} & \quad \text{81\%} \\
& \quad \text{F}_3\text{B} \cdots \text{OEt}_2 \\
& \quad \text{CH}_2\text{Cl}_2, -20 \degree \text{C} \\
& \quad \text{97\%}
\end{align*}
\]

3. Suggest a plausible mechanism for the following transformation:

\[
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\]

\[
\begin{align*}
\text{O} & \quad \text{KOH, MeOH then H}_3\text{O}^+ \\
\text{81\%}
\end{align*}
\]