Crossed aldol reaction is a variation of aldol reaction.

**aldol reaction:**

![Aldol Reaction Diagram]

**crossed aldol reaction:**

![Crossed Aldol Reaction Diagram]

**eg:**

![Example Reaction Diagram]

**Mechanism:**

**Step 1:** The hydroxide ion deprotonates the enolvable aldehyde reversibly.

![Step 1 Diagram]

**Step 2:** Enolate ion 1 preferentially adds to the non-enolvable aldehyde, which has the sterically less hindered and, therefore, more accessible carbonyl carbon.

![Step 2 Diagram]

**Step 3:** Alkoxide ion 2 is protonated by water.

![Step 3 Diagram]

see also crossed aldol condensation

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**Contributors**

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