

# Building Single Molecules from Single Atoms

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## Atom

- Laser cooling/trapping
- Internal state control
- High fidelity imagining
- ...

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- Laser cooling/trapping
- Internal state control
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## Molecule

- Strong interaction
- Rich internal structure

## Direct molecule cooling

# Path to Ultracold Molecules

**Direct molecule cooling**

**Making molecule from atoms**

# Path to Ultracold Molecules

**Assemble molecule in tweezers**

**Making molecule from atoms**

# Outline

## 1 System Overview

## 2 Trapping and Cooling of Atoms

## 3 Atom-Atom Interaction and Molecule Formation

# Steps



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