

Making Molecules that know Right from Left

Our Technology Story

Some molecules exist as mirror images of each other, like left and right hands. Although they appear similar, they can have very different effects in the body, making it important to distinguish between them in medicine. We created special molecules called chiral cavitands that can recognise and trap just one of these mirror-image forms and test how well they bind to different molecules.







Technology Features

The cavitands are designed to:

- sense the shape, size and type of molecules present.
- act as molecular switches to hold or let go of specific molecules in the presence of ions, such as sodium ions.

Potential Applications

- Used in research or medicine to distinguish between chemically similar molecules based on their structural differences.
- Enables pharmacies to isolate a left-handed or right-handed molecule from a mixture during purification.
- Helps in drug delivery by responding to changes in the environment, such as the presence of ions, potentially enhancing the effectiveness of drug delivery.

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