Curiosity Thread: A Shortcut Is Not a New Destination

Curiosity Reading | CheAI Research Inc.

Suppose two routes connect the same trailhead and overlook. One route climbs a steep ridge; the other uses a lower pass. The lower pass can get hikers to the overlook sooner, but it does not move either the trailhead or the overlook. A catalyst is modeled in much the same way: it changes a pathway barrier, not the initial or final thermodynamic states.

That is why two graphs are useful together. A concentration-time graph shows a faster observed change over a stated interval. A relative-energy diagram can model a lower barrier. Neither representation, by itself, is a complete molecular mechanism.

For a reversible system, the lower-pass analogy applies in both directions. A catalyst can help forward and reverse changes reach their balance more quickly. The balance point itself is not shifted merely because the route became faster.