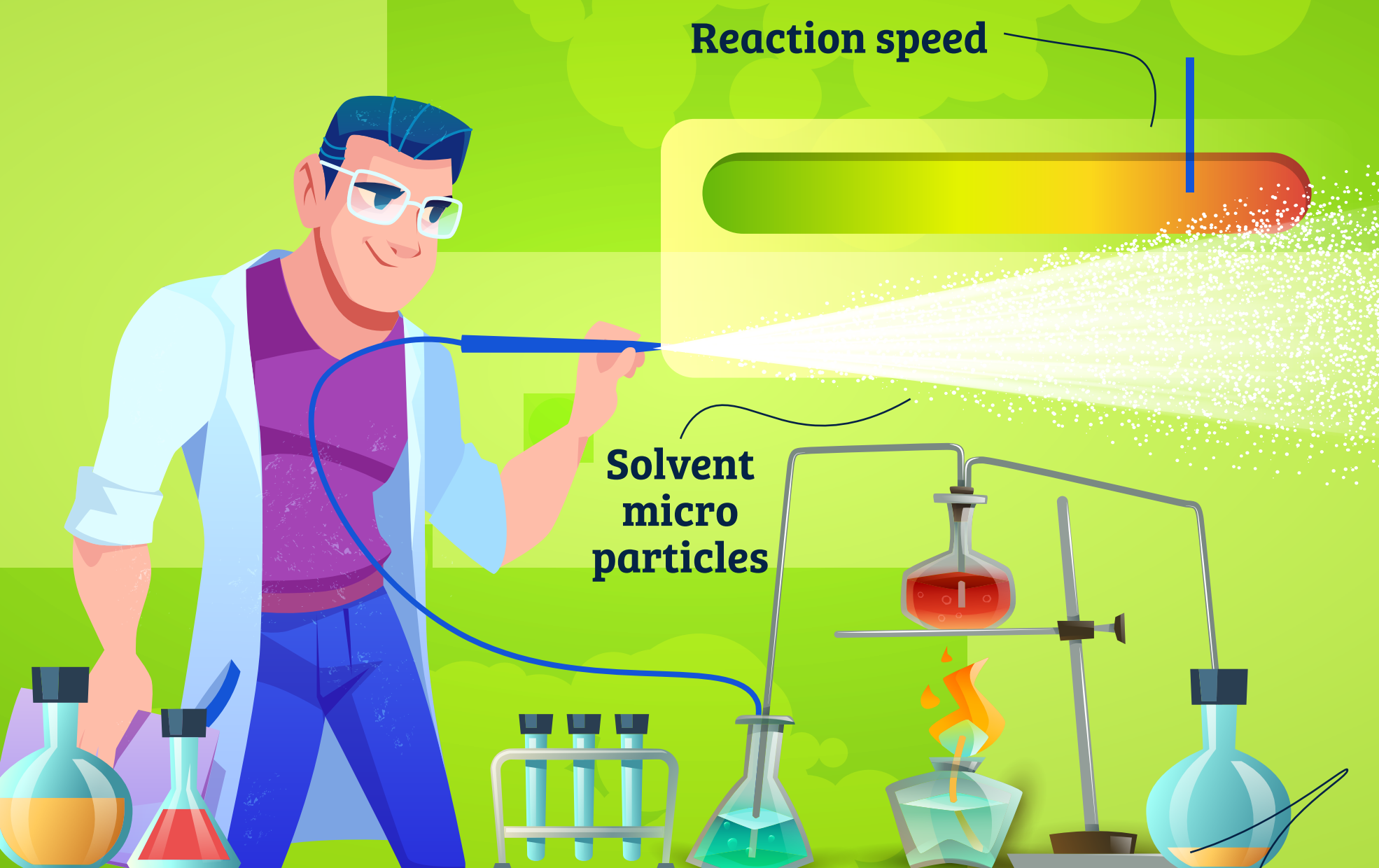


# Speeding Up Reactions by Spraying and Recycling Solvents

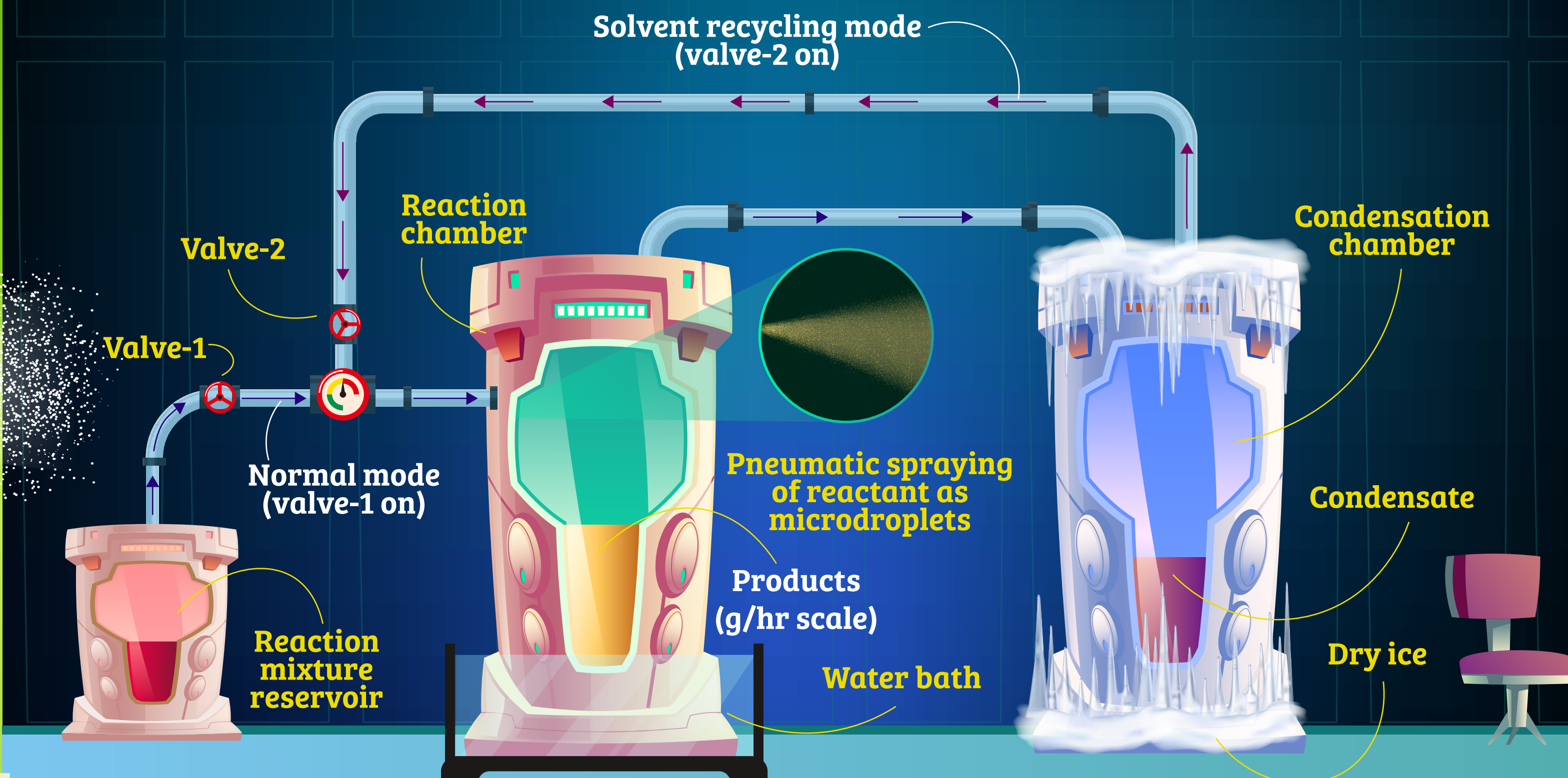
Spraying solution as microdroplets can accelerate reactions by factors of  $10^1$  to  $10^5$  compared to reactions with bulk liquid



But the short lifetimes of microdroplets limit product yield and reaction scalability, preventing practical use

Can a microdroplet reaction system be designed to overcome these issues?

Microdroplet reaction system including the solvent recycling process



Including a solvent recycling process in microdroplet reaction systems reduces wastage and increases droplet lifetime, thereby significantly enhancing yield and reaction speed

Chemical  
Science



High-yield gram-scale organic synthesis using accelerated microdroplet/thin film reactions with solvent recycling

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