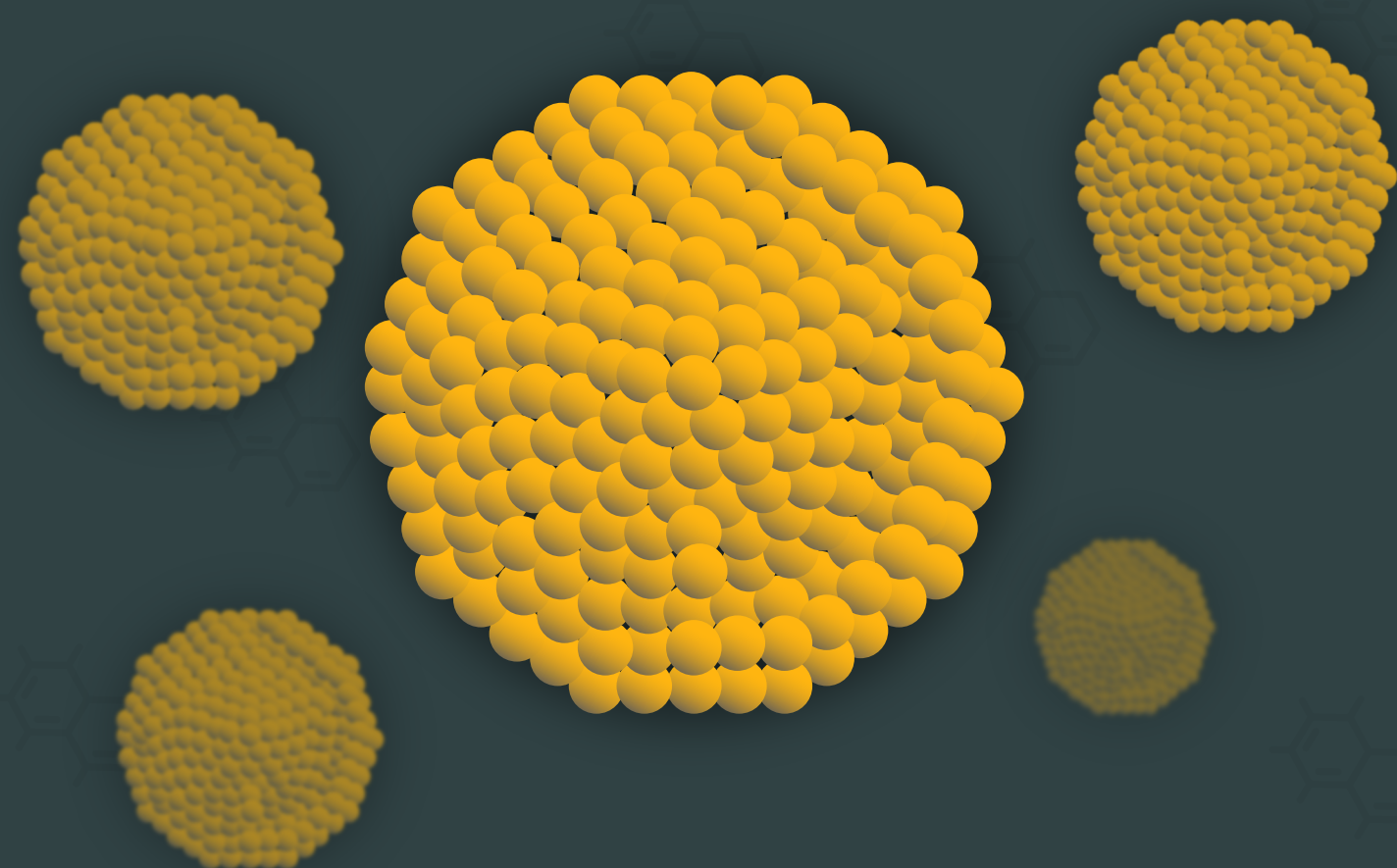


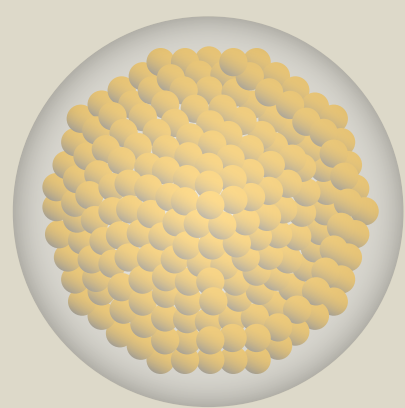
Quest for biocompatible nanoreactors reaches a new milestone

Palladium (Pd) metal nanoparticles (NP) are good catalysts that can mimic enzyme activity in living systems...

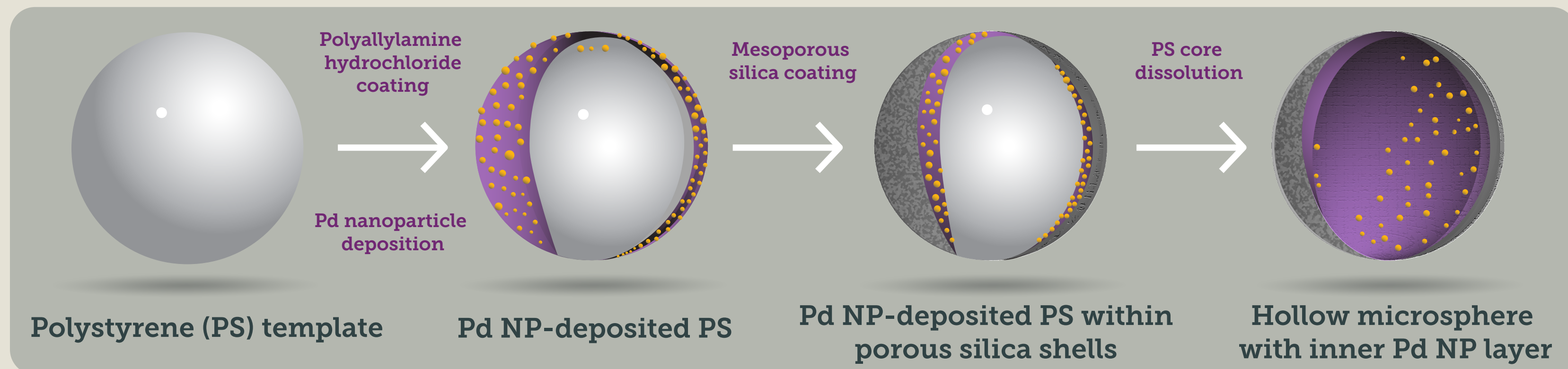


but most nanocatalysts only work in organic solvents, and become aggregated and deactivated in aqueous solvents.

Encapsulating Pd NP could overcome these limitations



Synthesis of hollow spheres with Pd-NP at their inner cavity



How are hollow-shelled Pd nanoreactors better than free NP?

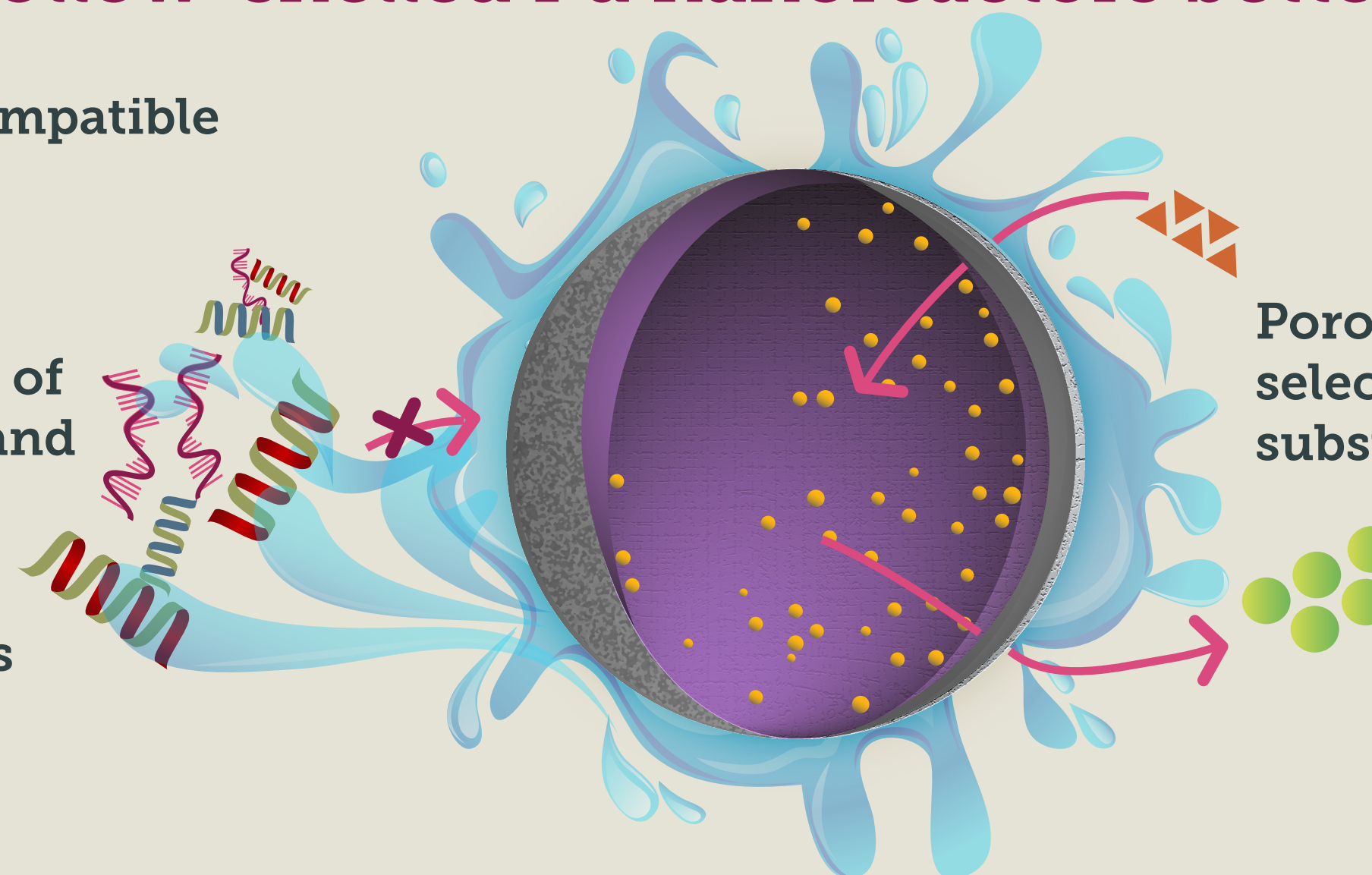
Biocompatible

Low biotoxicity

Stable at 37 °C

Prevents entry of biomolecules and leakage of Pd

Stable in aqueous solutions



Porous surface enables selective passage of substrates and products

Easy recovery by centrifugation

Novel biocompatible hollow-shelled Pd nanoreactors can be used for delivery of targeted therapies

Chemical
Science



Hollow nanoreactors for Pd-catalyzed Suzuki–Miyaura couplings and O-propargyl cleavage reactions in bio-relevant aqueous media

López, Correa-Duarte, Mascareñas *et al.* (2019)

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