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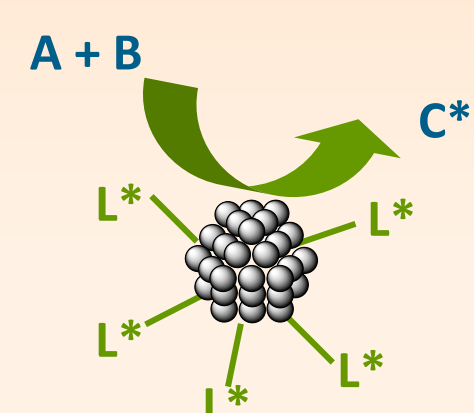
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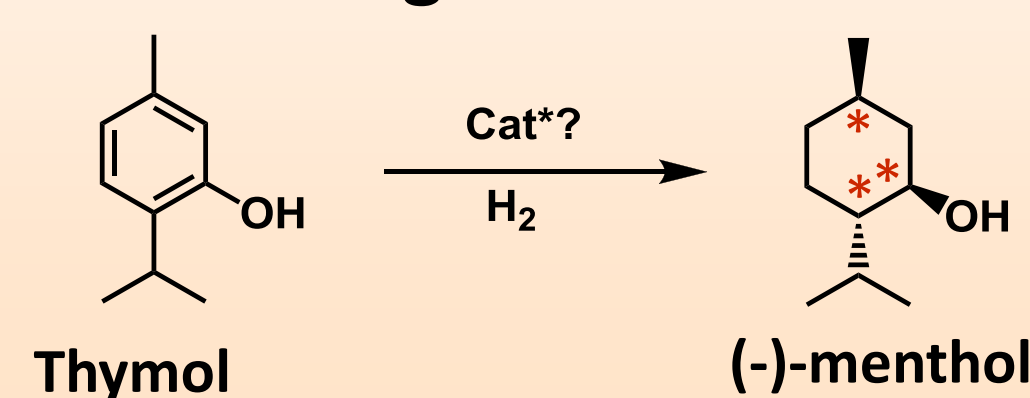
^c Université Européenne de Bretagne

BACKGROUND: TOWARDS SUSTAINABLE PROCESSES....

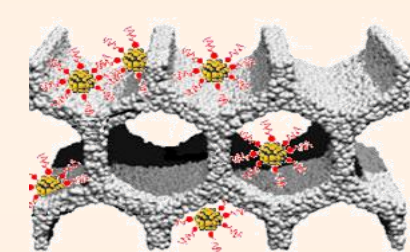
Metal nanoparticles: Pertinent catalysts for arene H₂



Asymmetric arene hydrogenation: a real challenge for fine chemistry



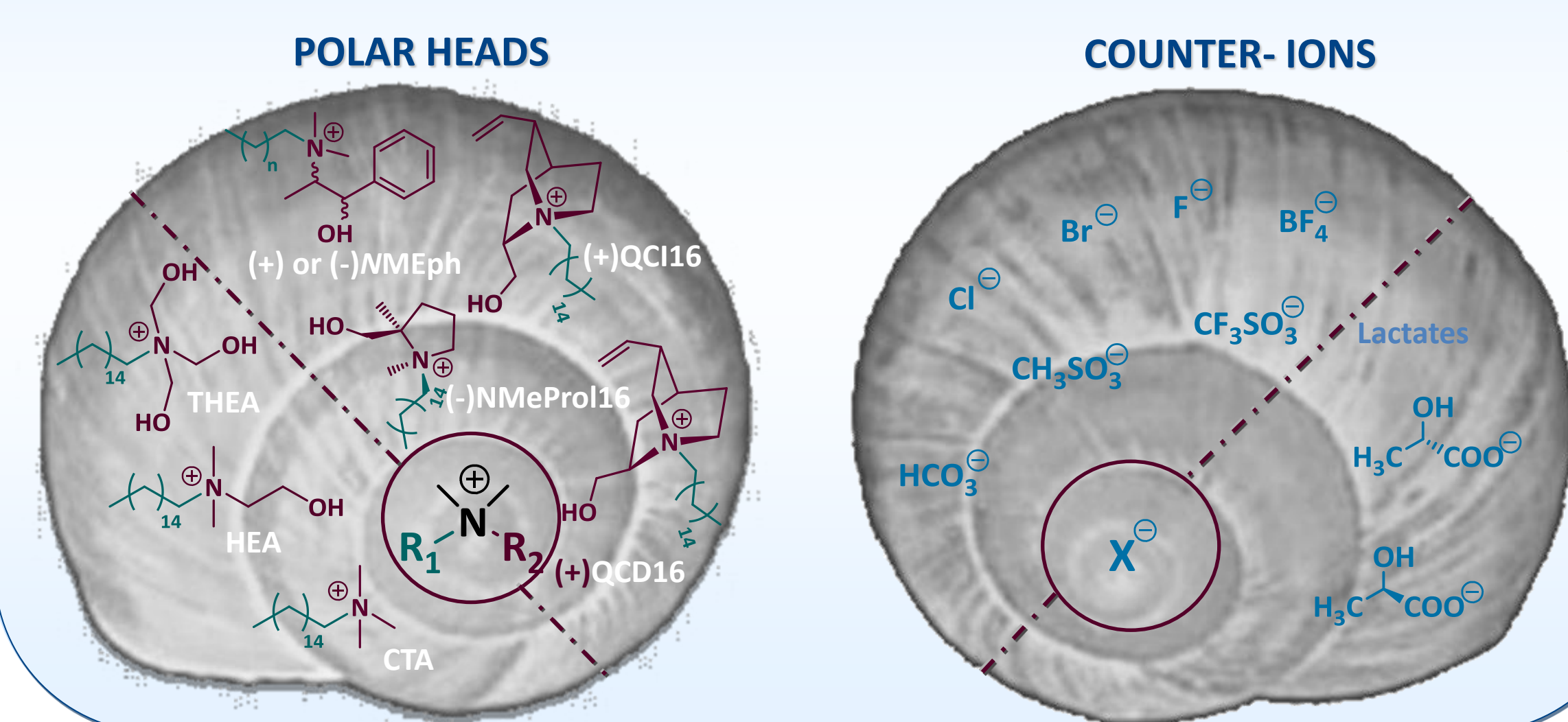
Confinement in mesoporous materials: Towards a better asymmetric induction



Water as reaction medium

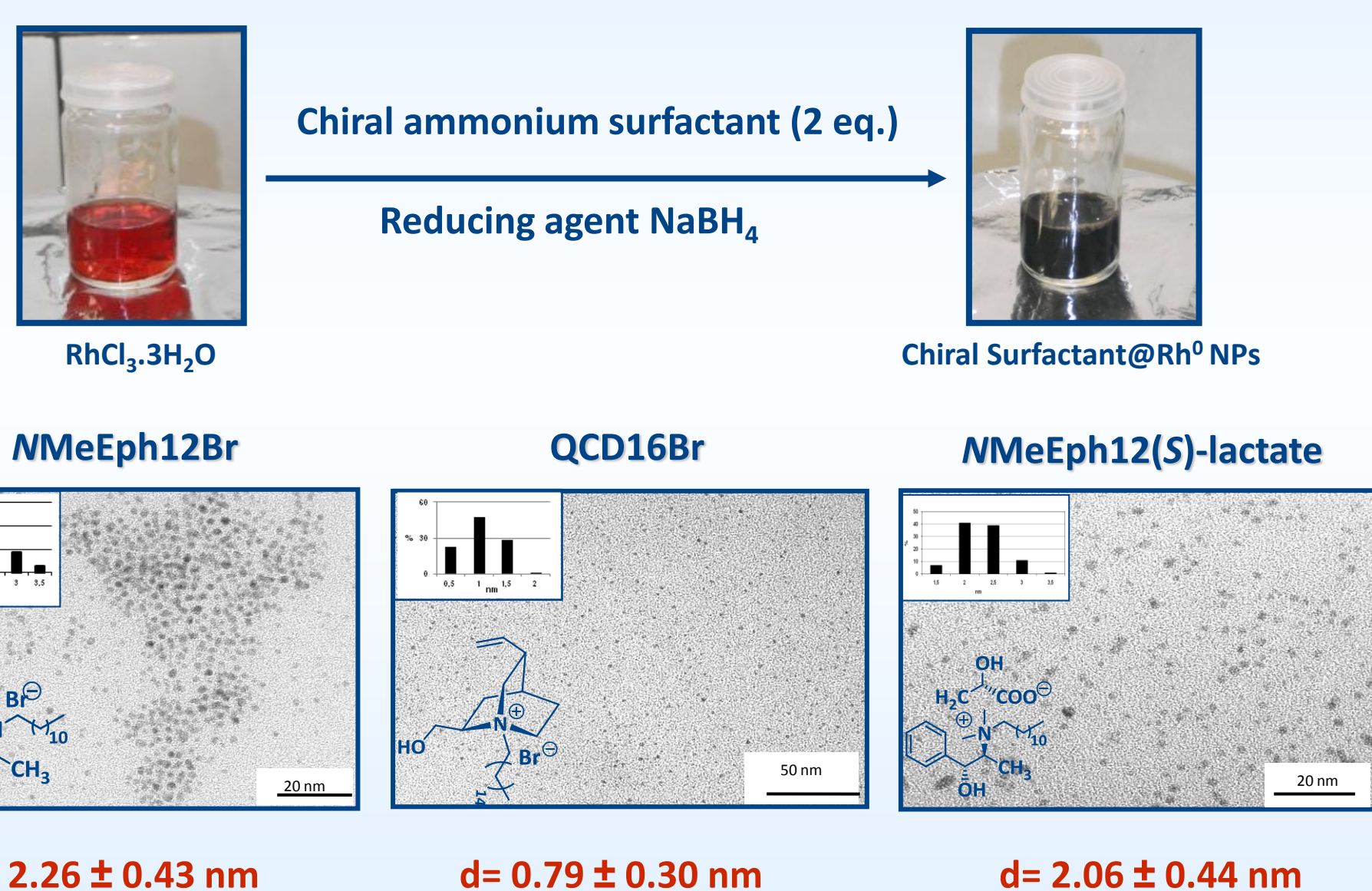
OPTICALLY ACTIVE AMMONIUM SURFACTANTS

- A dual role: Protective agents of Rh(0) NPs and chiral inducers
- A large variety obtained by short syntheses

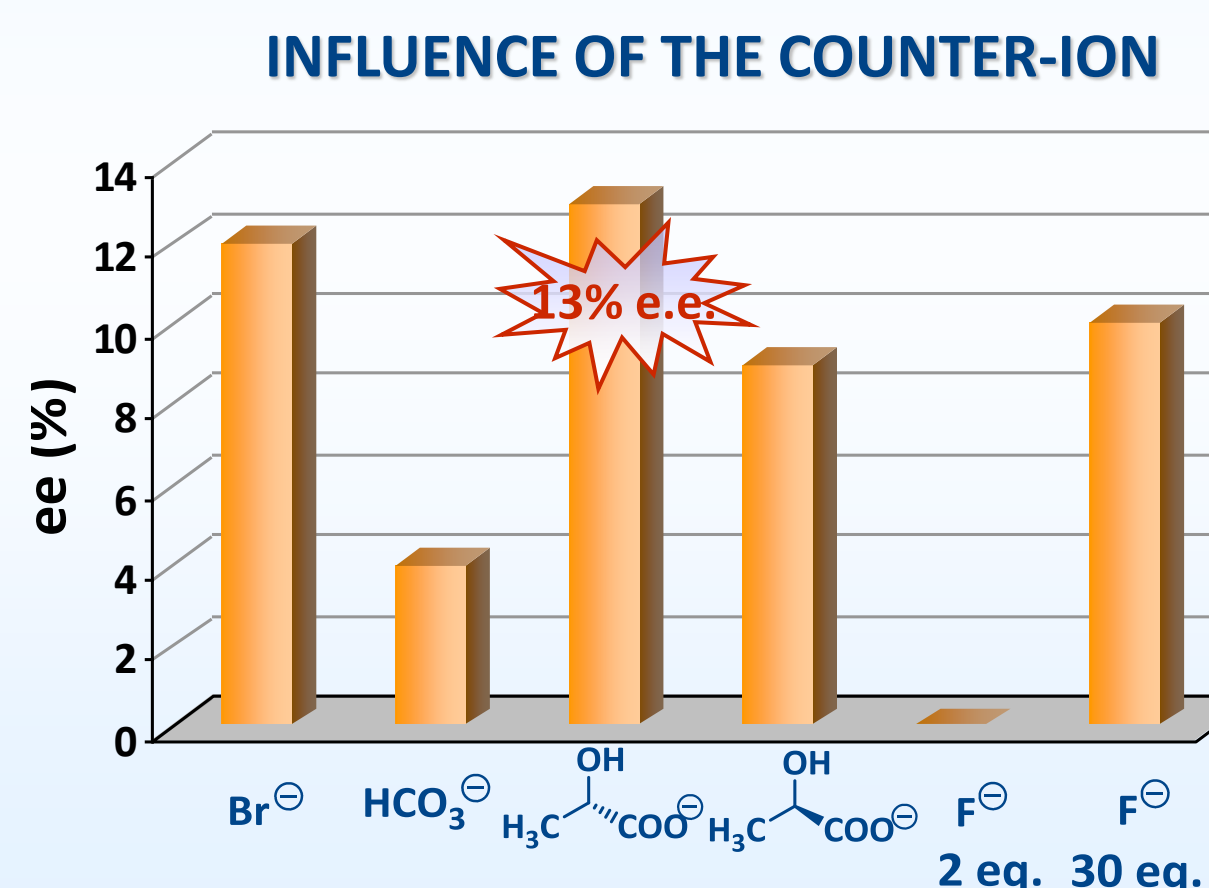
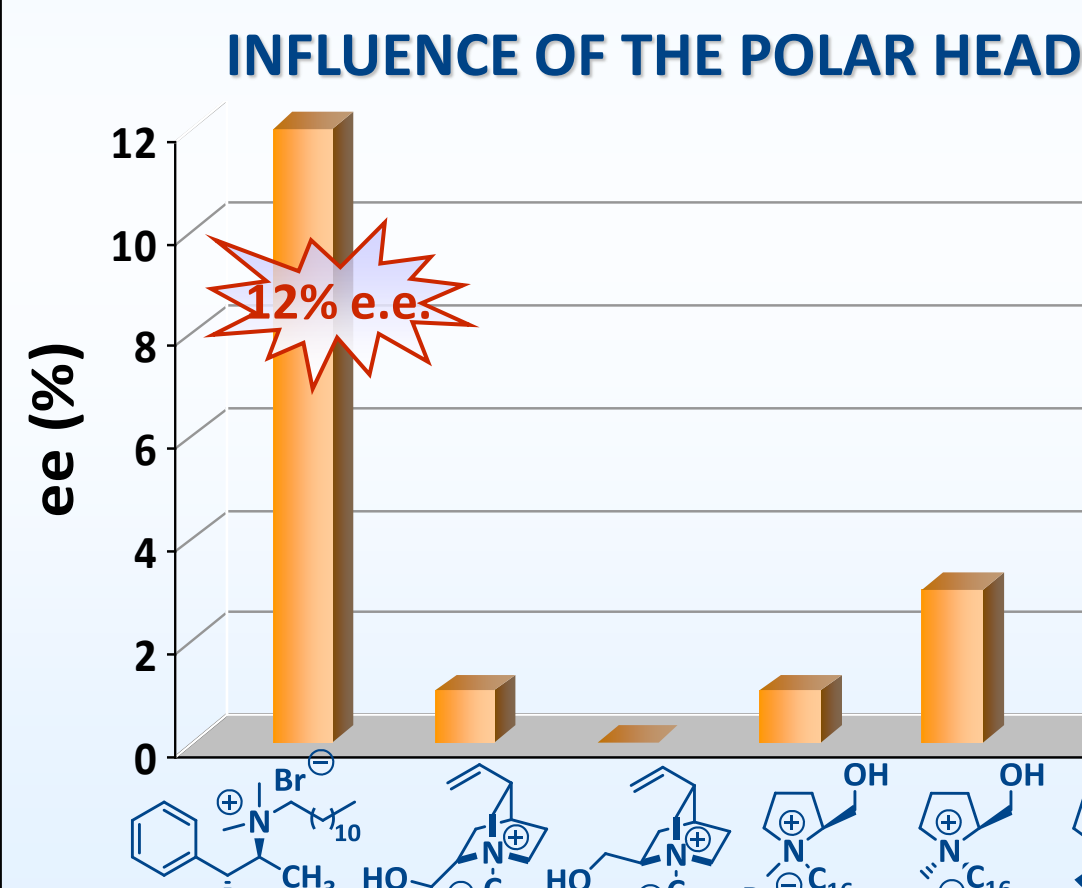
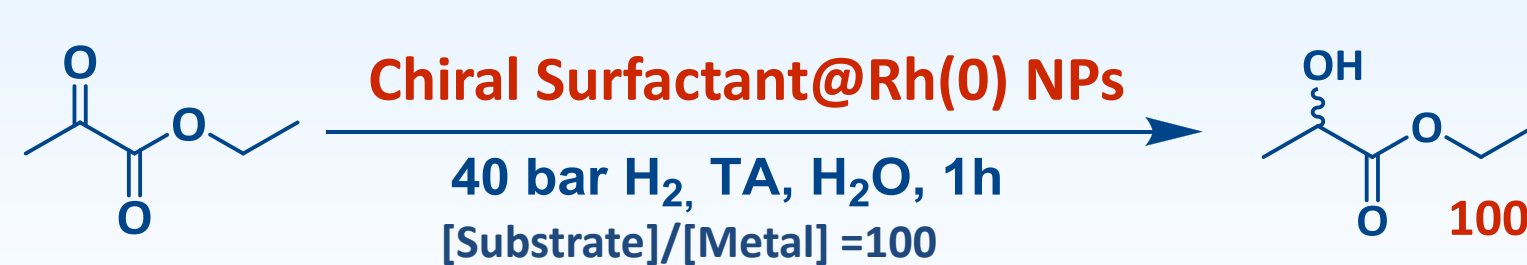


CHIRALLY MODIFIED AQUEOUS SUSPENSIONS OF Rh(0) NPs

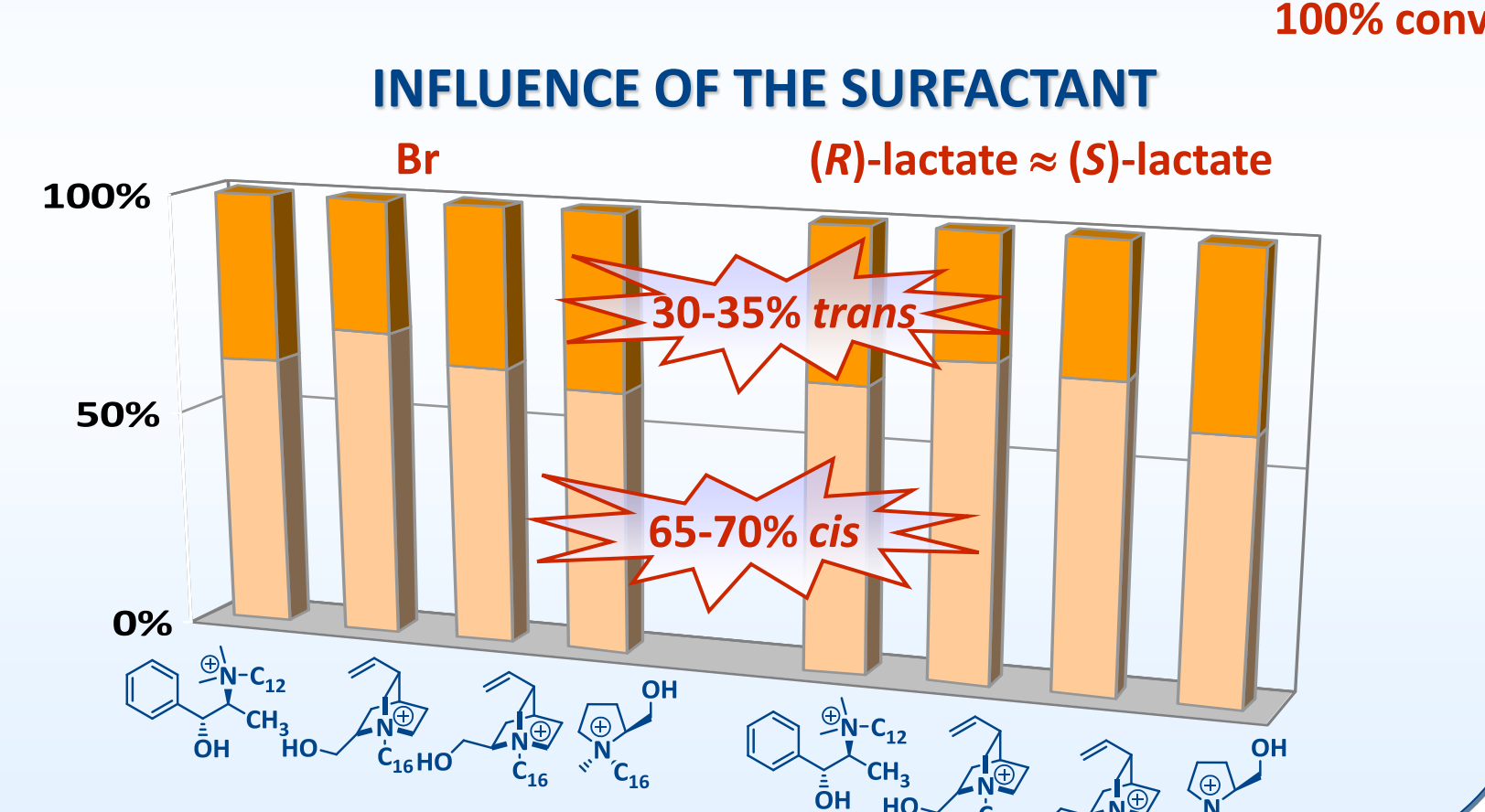
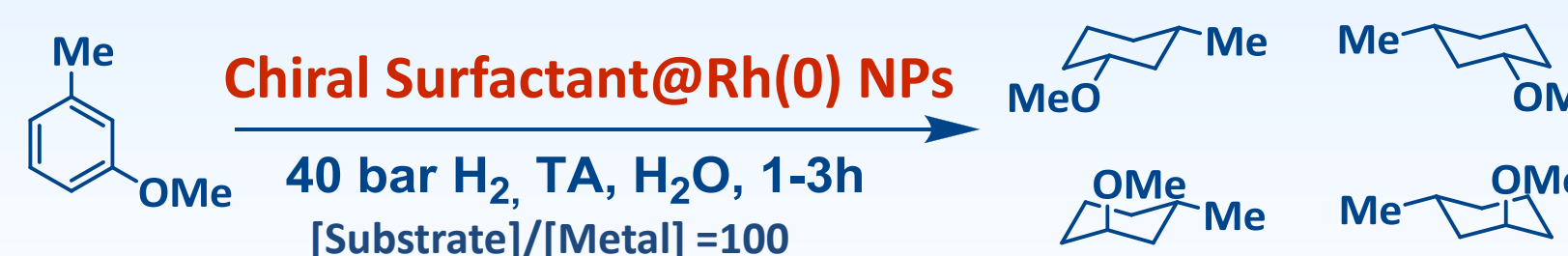
SYNTHESIS AND TEM CHARACTERIZATION



ASYMMETRIC HYDROGENATION OF ETHYLPYRUVATE IN NEAT WATER

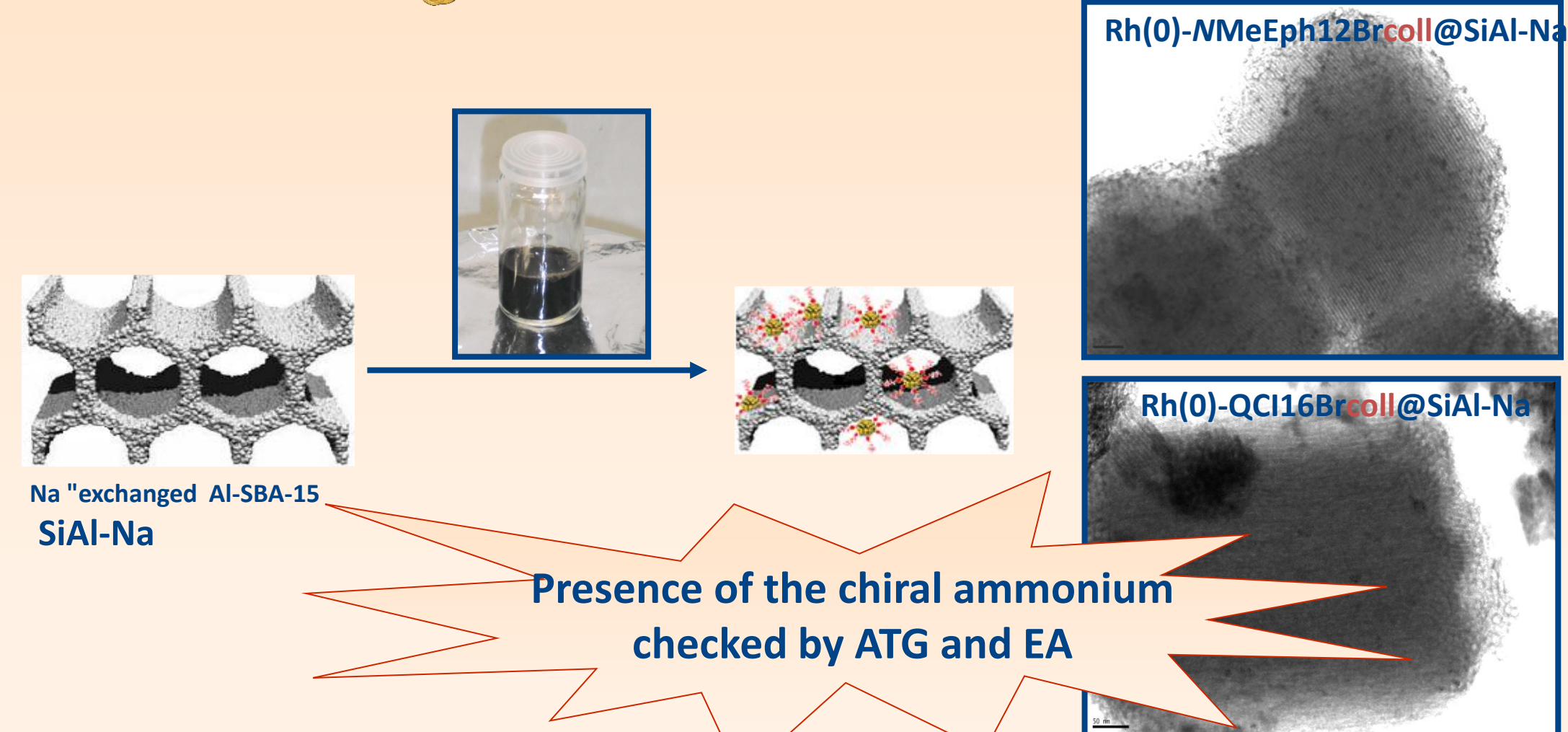


STERESELECTIVE REDUCTION OF *m*-METHYLANISOLE

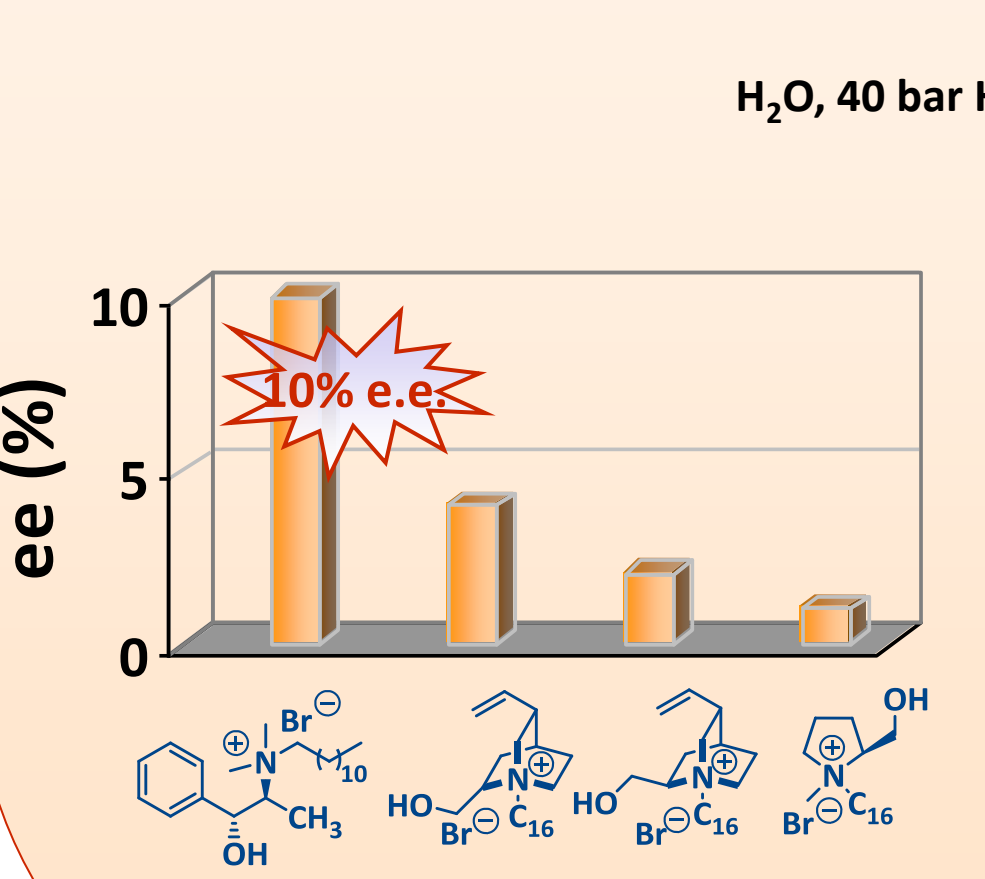


CONFINEMENT OF Rh(0) NPs IN CHIRALLY MODIFIED MESOSTRUCTURED MATERIALS

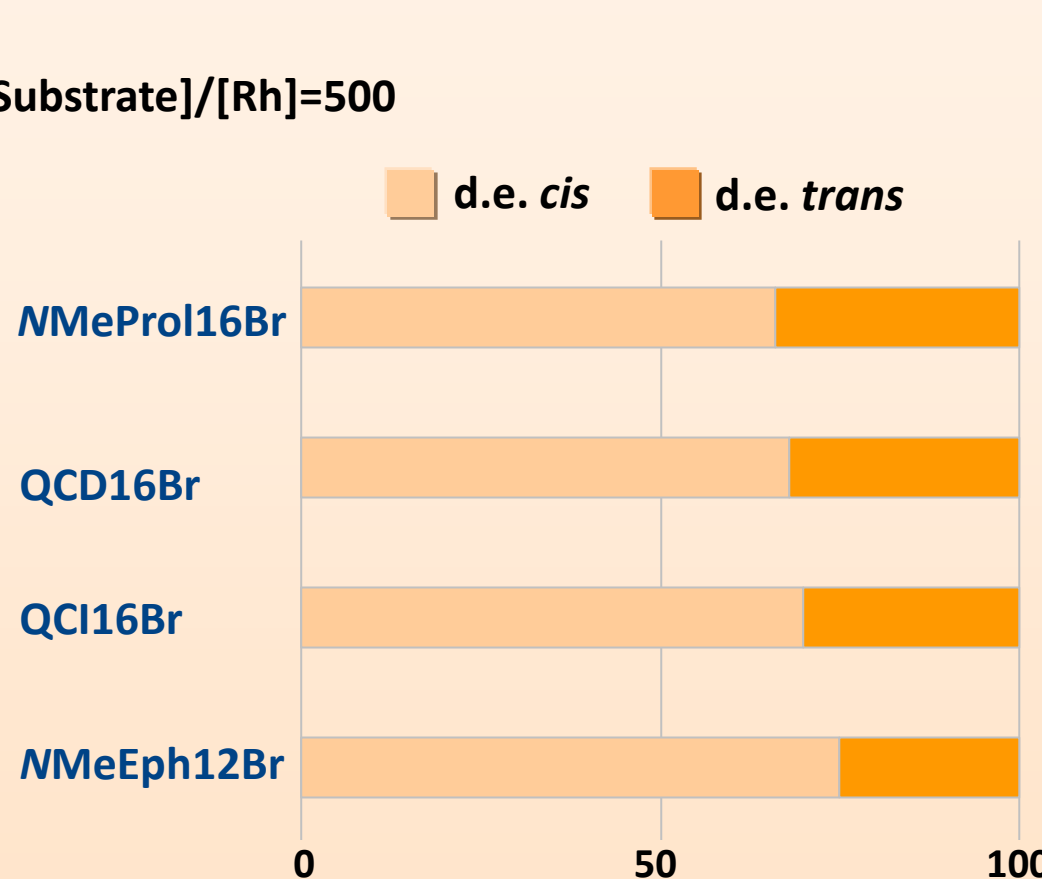
THE PREFORMED ROUTE



ETHYLPYRUVATE HYDROGENATION



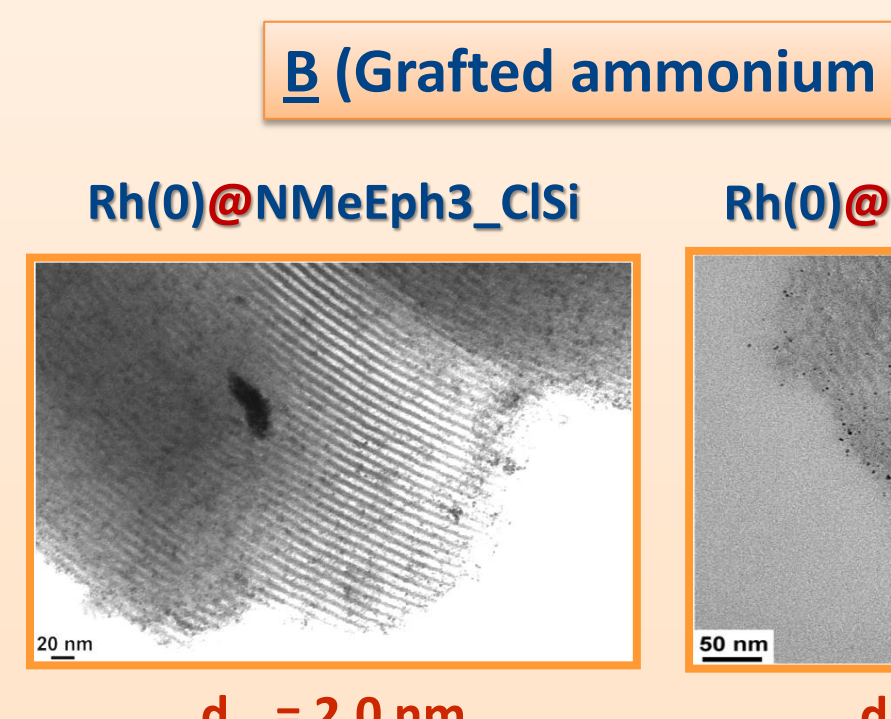
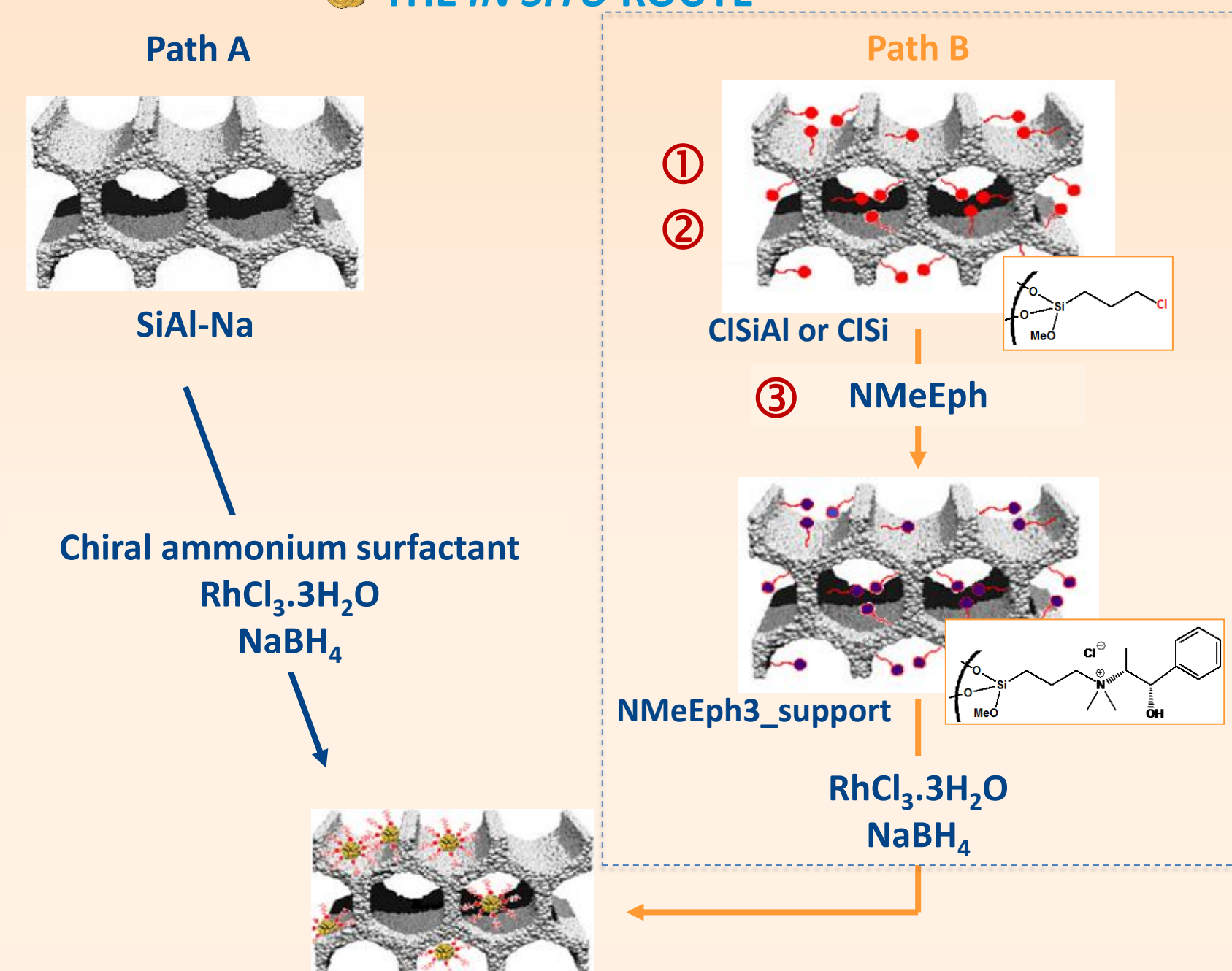
m-METHYLANISOLE HYDROGENATION



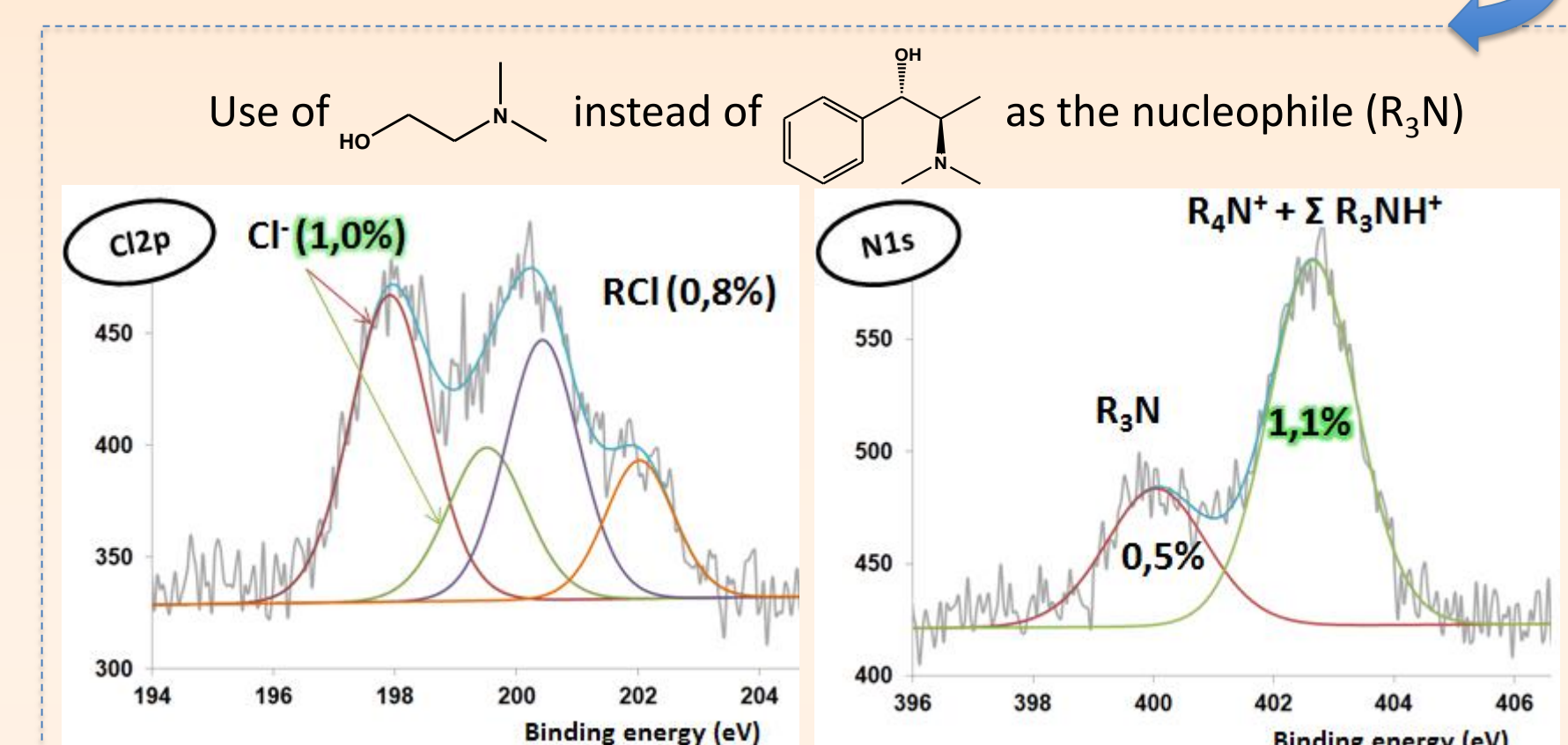
Easy method

Difficult to control the amount of protective agent

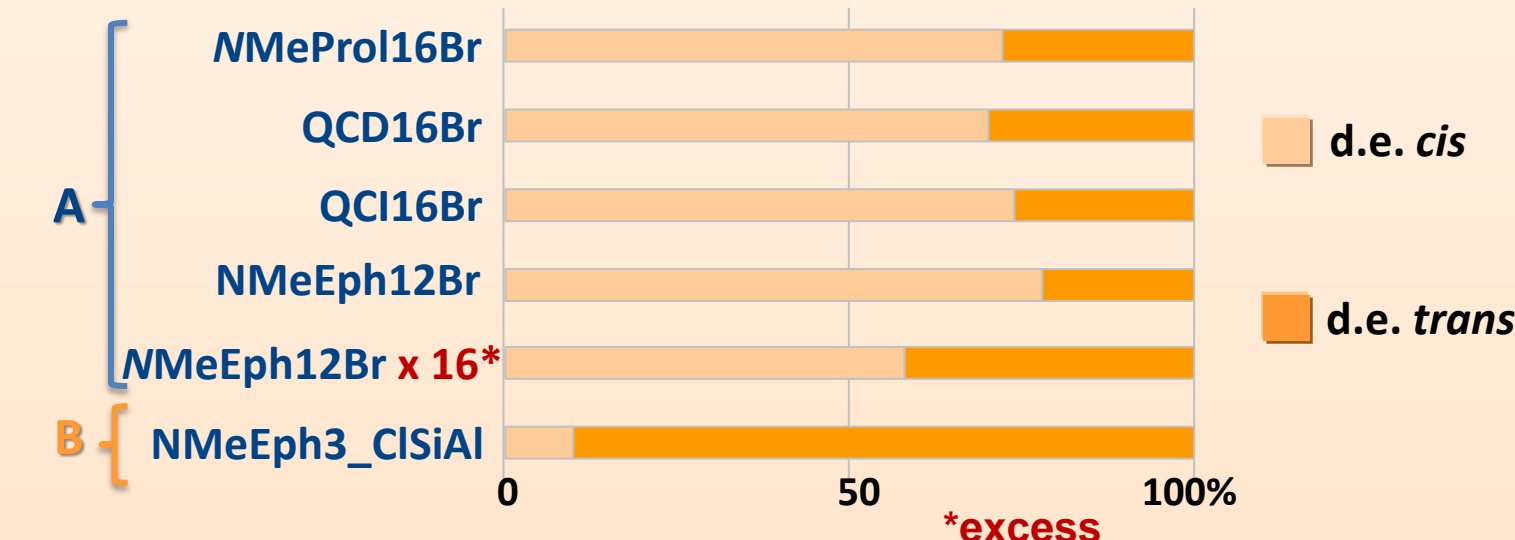
THE IN SITU ROUTE



- New procedure for "one-pot" synthesis of the CISIAl support
- Improvement of the template removal by a mild thermal post-treatment
- Nucleophilic substitution of Cl was optimized in achiral version



m-METHYLANISOLE HYDROGENATION



Better control of the location of protective agent

Inversion of d.e. for path B

Active catalysts in water but with low e.e.

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