

## Micropacked Bed Technology

600+ projects

kilo to metric ton scale

commercial and GMP projects



2024 ACS GCIPR CMO Excellence in Green Chemistry Award Winner

The award-winning project implemented innovative micropacked bed technology

### Technical advantages

#### ■ Safety, efficiency, consistency

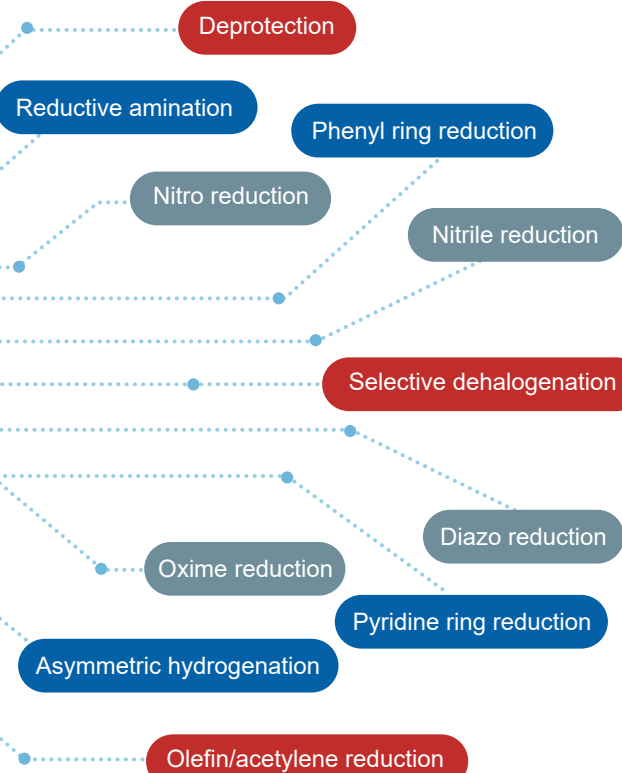
- Meet safety regulations
- Increased productivity
- No batch variation
- Heavy metal < 10 ppm

#### ■ Superior selectivity

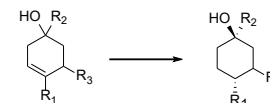
#### ■ Significant cost savings

- Lower catalyst cost
- Lower solvent usage
- Shorter production time

### Reactions applied at manufacturing scale



## Cases



Comparison	Batch	Micropacked Bed
Catalyst loading	3.3%	<0.5%
Reproducibility	Poor	Good
Solvent	20V	10V
Product delivered	--	Hundred Kilo



Comparison	Batch	Micropacked Bed
Catalyst	Raney Ni	Supported Catalyst
Product	74% (HPLC)	82% (HPLC)

## Integrated solutions

- Proof of concept and bench-scale R&D of flow hydrogenation process
- Pilot-scale process research, design and operation
- Turnkey solution service for industrial-scale plant operation (including hydrogenation process, equipment and catalyst)

