

One-step method for the postsynthetic modification of metal-organic frameworks

The ICN2 is a point of reference in the delivery of MOF production technologies to industry. Our patented spray drying technology for the postsynthetic modification of MOFs outperforms current techniques, offering faster reaction times and improved conversion rates across the board.

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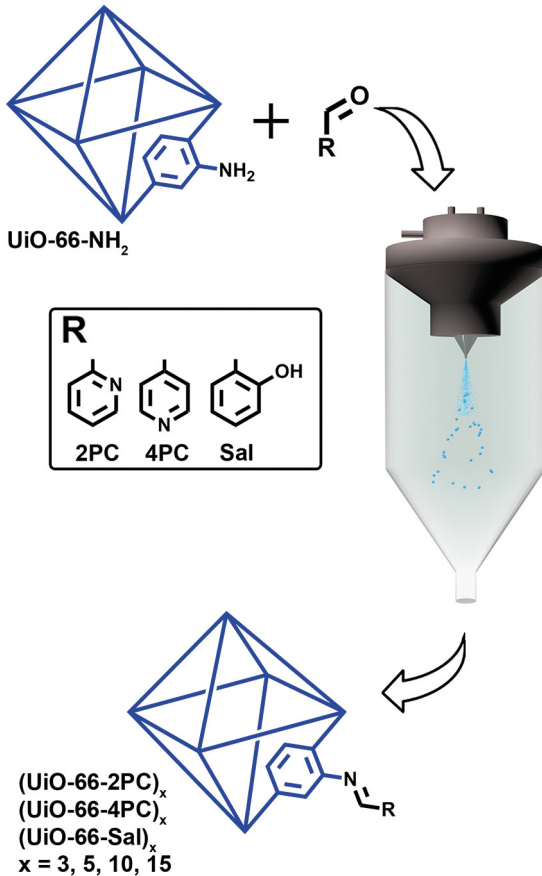
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Metal-organic frameworks (MOFs) are among the most attractive porous materials known today. Their high surface-to-mass ratio makes them extremely useful in many processes, from gas sorption, storage and separation, to catalysis, drug delivery and heat exchange. Typically they are modified post-synthesis to optimise their chemical functionality and/or pore surface chemistry to a specific application. The Schiff base reaction is a well-known method for this, though the processes involved are typically long and costly.

Our **spray drying** technique drastically reduces these reaction times and does so without compromising the integrity of the original MOF. It also allows for continuous production, which sees cost-effectiveness and overall yields soar.

Main advantages:

- ▶ Drastically reduced reaction times from days to just seconds!
- ▶ Easily achievable reaction temperatures (80-100°C)
- ▶ Vastly superior conversion rates
- ▶ Continuous production