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# Large Sample Volume Magic Angle Spinning Nuclear Magnetic Resonance Probe for In Situ Investigations with Constant Flow of Reactants

## SUMMARY

Magic Angle Spinning (MAS) is the only NMR technique that allows a high resolution NMR spectrum to be acquired on solids, semi-solids or mixtures of these materials. Thus, MAS NMR is an attractive tool for in situ investigations of reaction dynamics and intermediates related to such materials, including studies of active sites in a heterogeneous catalytic reaction.

A number of in situ MAS NMR techniques have been developed. However, previous techniques have only allowed for in situ studies of small sample volumes. The flow through design of the probe improves the diffusion of the reactants and products. This allows in situ studies to be performed on samples large enough that constant flow MAS NMR can be performed at natural abundance.



### Technology Portfolio(s)

- » Nuclear Magnetic Resonance Spectroscopy and Imaging

### Potential Industry Applications

- » Computers & Electronics
- » Healthcare, Pharma, Biotech & Medical

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