

## Electronic Supplementary Information (ESI)

### Magnetic resonance imaging methods for in situ studies in heterogeneous catalysis

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#### MOVIE

**Supplementary Movie.** The succession of images detected during the hydrogenation of AMS on a single catalyst pellet (right) in combination with the temperature data (left). Green vertical lines separate intervals during which the liquid AMS supply rate remains constant ( $8.2 \times 10^{-4}$ ,  $8.6 \times 10^{-4}$ ,  $7.1 \times 10^{-4}$ ,  $6.4 \times 10^{-4}$ ,  $5.8 \times 10^{-4}$ ,  $7.3 \times 10^{-4}$  g/s). The dynamic processes are shown 340 times faster than in the actual experiment.