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Cover story

(Hui Shang, Chong Guo, Pengfei Ye, Wenhui Zhang, pp. 1088–1098)

The development of hydrosulfurization (HDS) technology is urgent for the production of clean gasoline due to the strict environmental regulations. Major challenge is to increase the HDS performance while reduce the hydrogenation of olefins, which contributes a lot gasoline octane number. The special interaction between microwave and the material's molecules highlights the obvious advantages by using microwave in the area of HDS of petroleum oils. The HDS catalyst prepared by microwave heating presents enhanced properties as enlarging the surface area, reducing the acidity of the support, improving the stacking numbers of the active components, all of which contributes to higher HDS performance. The study of the synergistic effect between microwave and catalyst is the key to microwave high efficiency HDS technology, which is of great significance to the production of ultra-low sulfur clean gasoline.



Author: Prof. Hui Shang has been working in the State Key Laboratory of Heavy Oil Processing, China University of Petroleum (Beijing) since 2008. She holds BSc and MSc degrees and PhD in Chemical Engineering and Technology. The main focus of Prof. Shang's research is microwave chemistry and clean oil production technology. She has rich experience on the design, scale up and commercialization of microwave processes. The research has focused upon developing a fundamental understanding of the interaction of microwave energy with materials at a molecular level to maximize the reaction performance and process benefits.

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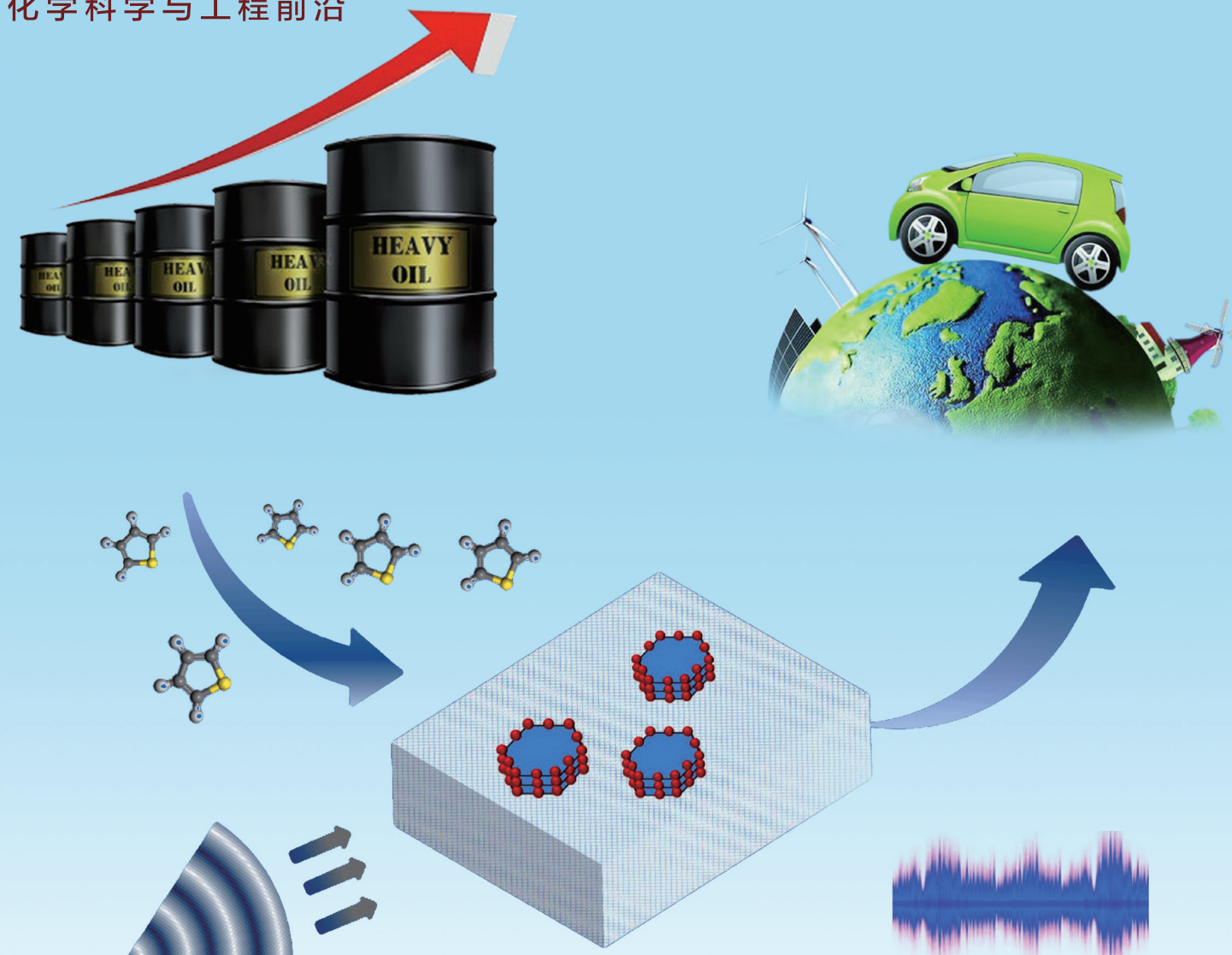
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