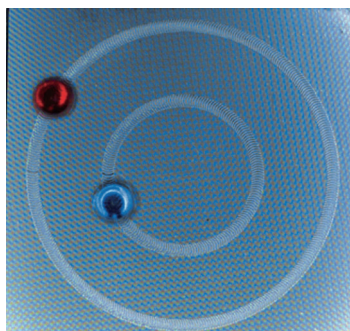


NOW IN EARLYVIEW

I. You, N. Yun, H. Lee*

Surface-Tension-Confined Microfluidics and Their Applications

DOI: 10.1002/cphc.201200929

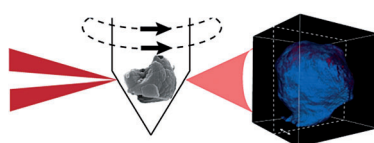


Showing the way: Emerging microfluidic systems called surface-tension-confined microfluidic (STCM) devices are reviewed. STCM devices utilize surface energy that can control the movement of fluid droplets. Unlike conventional microfluidics, which confine the movement of fluids by three-dimensional microchannels, STCM systems provide two-dimensional platforms for microfluidics.

L. R. Aramburo, Y. Liu, T. Tyliszczak,
F. M. F. de Groot, J. C. Andrews,
B. M. Weckhuysen*

3D Nanoscale Chemical Imaging of the Distribution of Aluminum Coordination Environments in Zeolites with Soft X-Ray Microscopy

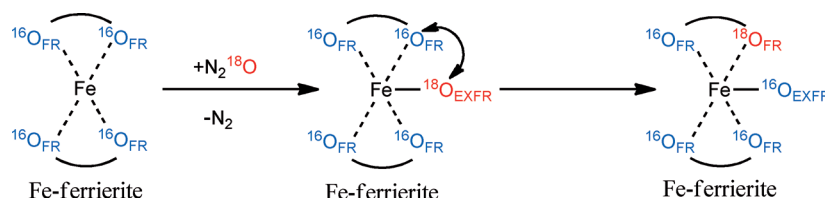
DOI: 10.1002/cphc.201201015



Which side are you on? Scanning transmission X-ray microscopy is used for the first time to elucidate the coordination and distribution of aluminum in industrial-relevant zeolites at the single-particle level. Extended regions of a few hundred nanometers, rich in higher aluminum coordination environments, are heterogeneously embedded within the zeolite particle, before and after a steaming post-treatment.

P. C. Andrikopoulos, Z. Sobalik,
J. Novakova, P. Sazama, S. Sklenak*
 Mechanism of Framework Oxygen Exchange in Fe-Zeolites: A Combined DFT and Mass Spectrometry Study

DOI: 10.1002/cphc.201200900

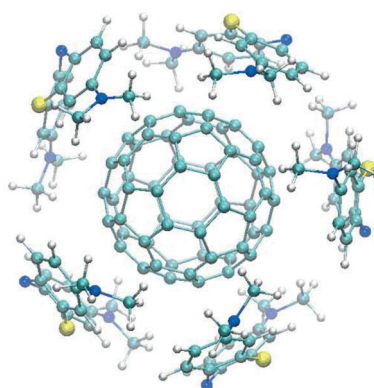


The role of framework oxygen atoms $^{16}\text{O}_{\text{FR}}$ in N_2^{18}O decomposition over Fe-ferrierite is investigated employing

a combined experimental and theoretical (periodic density functional theory calculations) approach.

M. P. Evstigneev,* A. S. Buchelnikov,
D. P. Voronin, Y. V. Rubin, L. F. Belous,
Y. I. Prylutskiy, U. Ritter
 Complexation of C_{60} Fullerene with Aromatic Drugs

DOI: 10.1002/cphc.201200938



A complex matter: The contributions of various physical factors to the energetics of complexation of C_{60} fullerene molecules with aromatic drugs are investigated.