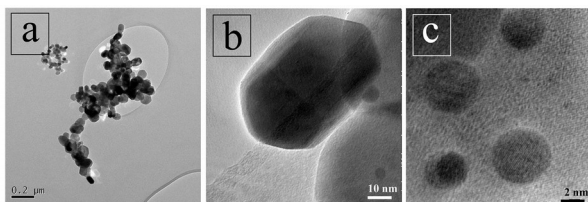
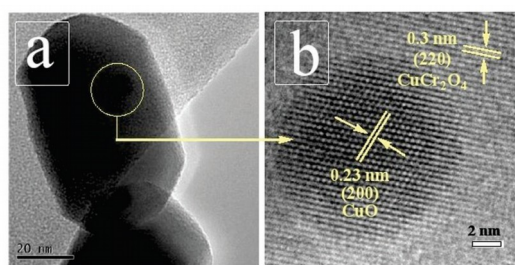
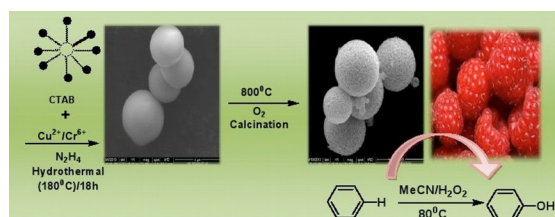


Activation of molecular oxygen by Cu-Cr catalyst:

Three-dimensional (3D) nanostructures have drawn much attention, because of their potential applications mainly in catalysis, removal of pollutants in water treatment, etc. However, the controlled construction of 3D architectures from nanobuilding blocks via chemical routes still remains a challenge in material chemistry research, because control of the nucleation and growth of nanomaterials is really a mammoth task. We have developed the surfactant-assisted preparation of 3D raspberry-like CuCr_2O_4 spinel nanoparticles via a hydrothermal synthesis method.



These Cu-Cr catalyst are very active for the selective oxidation of benzene to phenol, benzene to aniline, aniline to azoxybenzene

References:

1. Shankha Shubhra Acharyya, Shilpi Ghosh, Ritesh Tiwari, Chandrashekhar Pendem, Takehiko Sasaki, Rajaram Bal^{*}; ACS Catalysis 5 (2015) 2850.
2. Shankha Shubhra Acharyya, Shilpi Ghosh, Rajaram Bal^{*}; Chem. Commun. 51 (2015) 5998.
3. Shilpi Ghosh, Shankha Shubhra Acharyya, Takehiko Sasaki, Rajaram Bal^{*}; ACS Sustainable Chemistry & Engineering 3 (2015) 2823.
4. Shankha Shubhra Acharyya, Shilpi Ghosh, Rajaram Bal^{*}; ACS Applied Materials & Interfaces 6 (2014) 14451.
5. Shankha, Shubhra Acharyya, Shilpi Ghosh, Rajaram Bal^{*}; Chem. Commun. 50 (2014) 13311.