

Supplementary Materials

Cu/CuO Composite Track-Etched Membranes for Catalytic Decomposition of Nitrophenols and Removal of As(III)

Anastasiya A. Mashentseva ^{1,2,*}, Murat Barsbay ³, Maxim V. Zdorovets ^{1,2,4}, Dmitriy A. Zheltov ¹ and Olgun Güven ³

¹ The Institute of Nuclear Physics of the Republic of Kazakhstan, Ibragimov str., 1, 050032 Almaty, Kazakhstan; mzdorovets@gmail.com (M.V.Z.); zheltovda@gmail.com (D.A.Z.)

² Engineering Profile Laboratory, L.N. Gumilyov Eurasian National University, Satpaev str., 5, 010008 Nur-Sultan, Kazakhstan

³ Department of Chemistry, Hacettepe University, 06800 Ankara, Turkey; mbarsbay@hacettepe.edu.tr (M.B.); guven@hacettepe.edu.tr (O.G.)

⁴ Department of Intelligent Information Technologies, Ural Federal University named after the first President of Russia B. N. Yeltsin, Mira str. 19, 620002 Yekaterinburg, Russia

* Correspondence: a.mashentseva@inp.kz or mashentseva.a@gmail.com

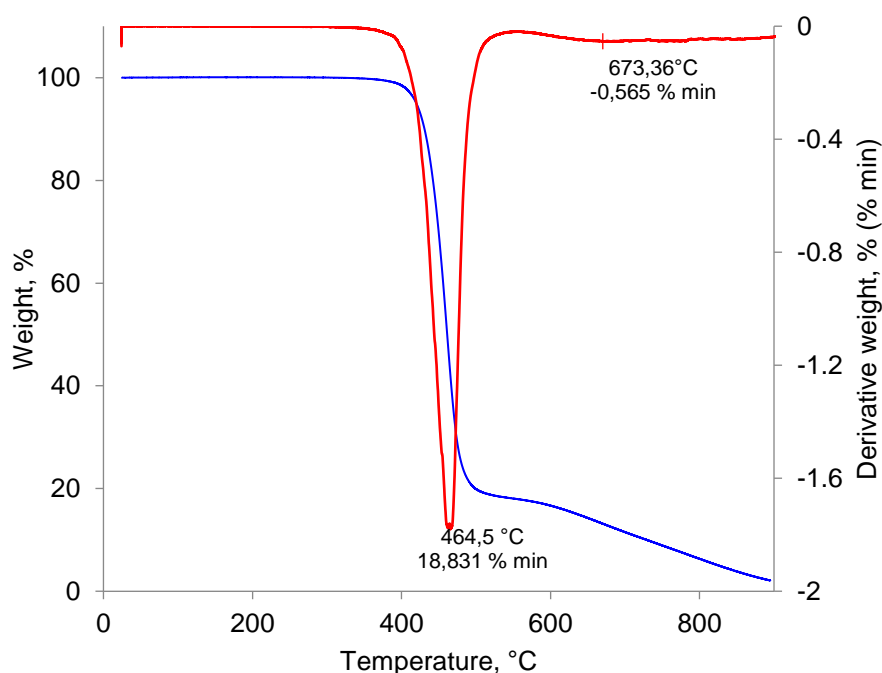
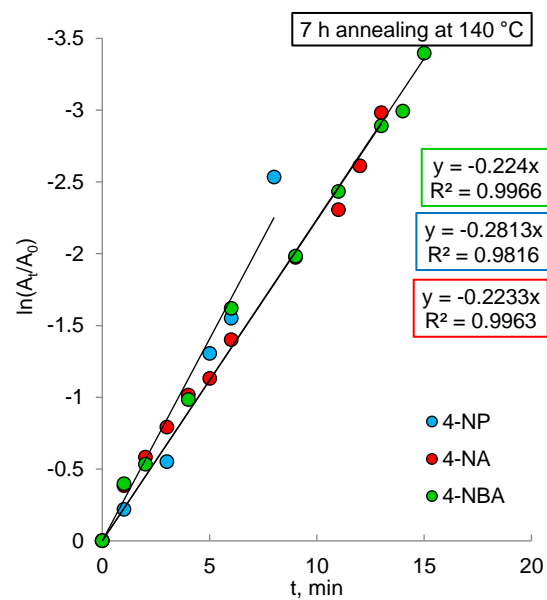
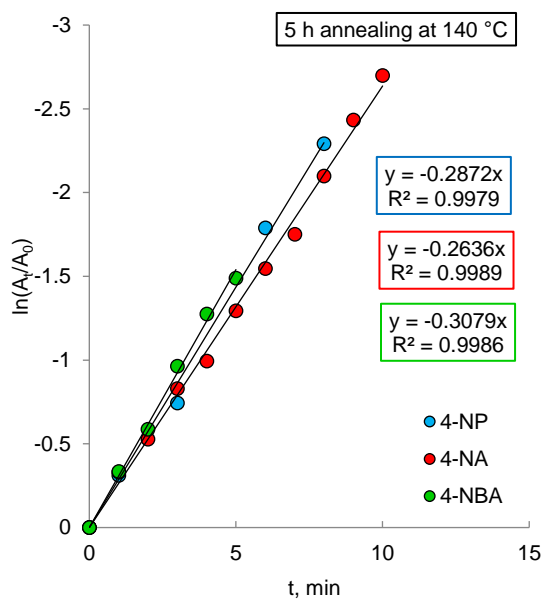
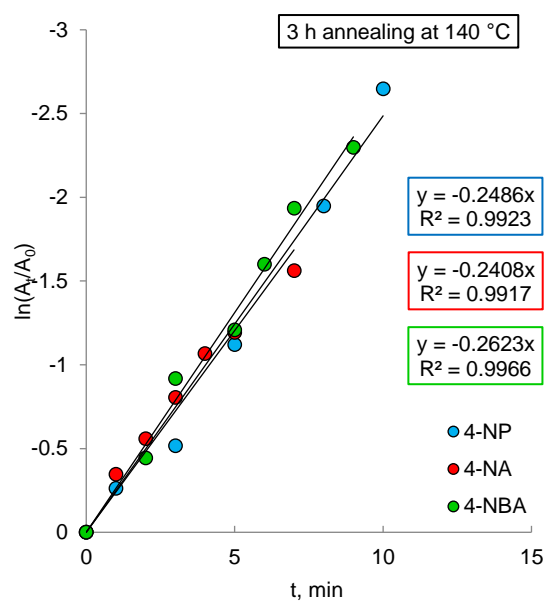
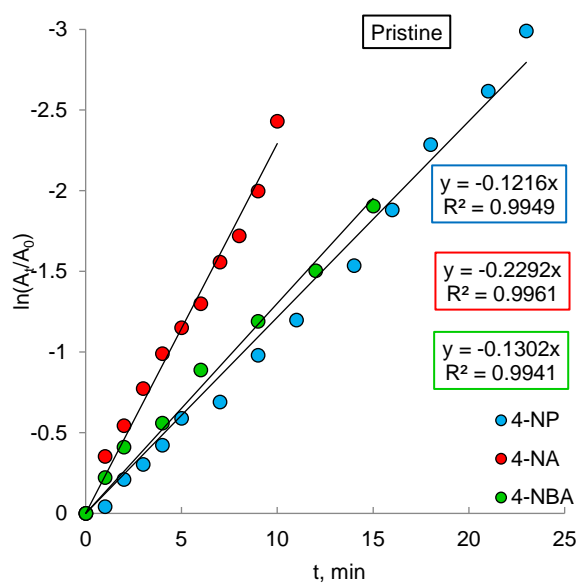


Figure S1. TGA and DTG curves of the PET template.



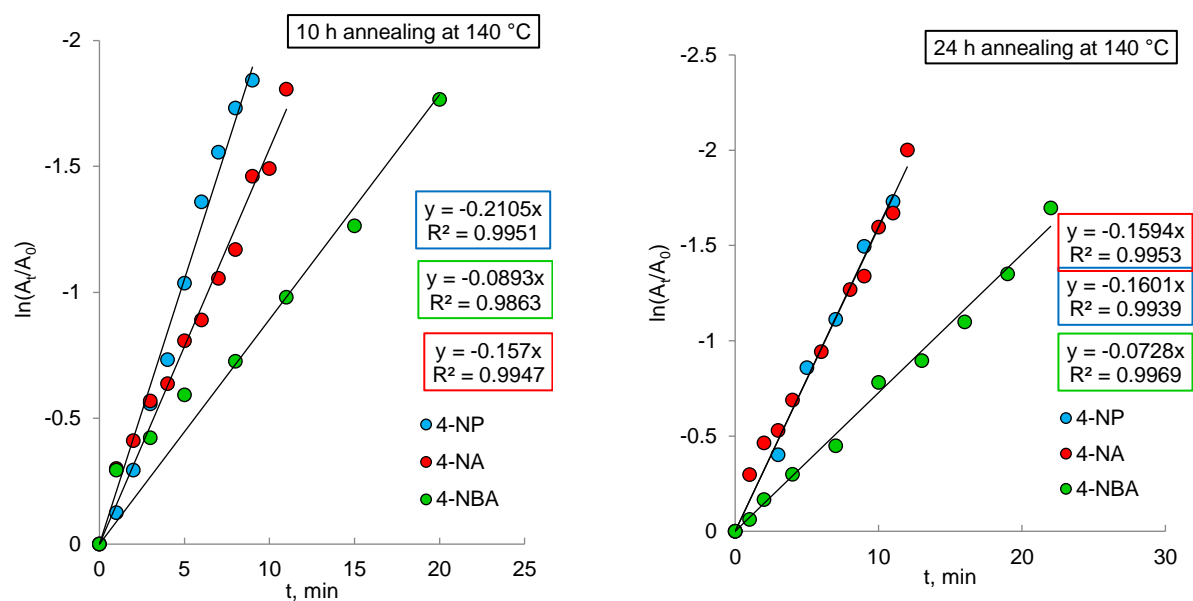
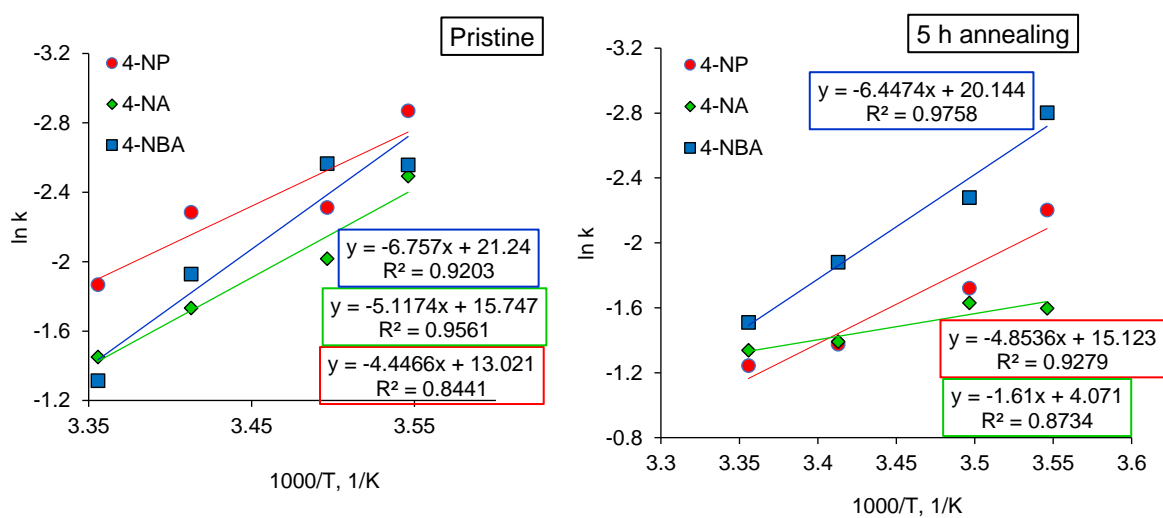


Figure S2. Pseudo-first-order kinetics for hydrogenation of 4-NP, 4-NA and 4-NBA in the presence of the Cu/CuO composite TeMs.



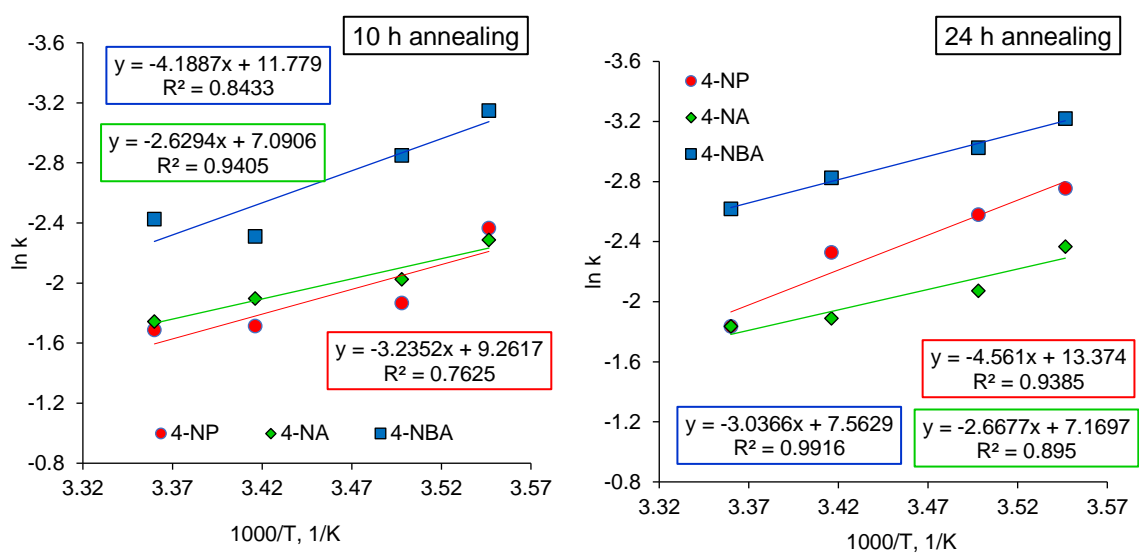


Figure S3. The Arrhenius plots of $\ln k$ vs. $1/T$ for the reduction reaction of 4-NP, 4-NA and 4-NBA with NaBH_4 at different temperatures in the presence of Cu/CuO composite TeMs.