

Supplementary Information

Conversion of Wheat Straw into Formic Acid in NaVO₃/H₂SO₄ Aqueous Solution with Molecular Oxygen

Muge Niu,^a Yucui Hou,^b Shuhang Ren,^a Weize Wu^{*a} and Kenneth N. Marsh^{*c}

^a State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, 100029, Beijing, China. Fax/Tel: 86 10 64427603; E-mail: wzwu@mail.buct.edu.cn

^b Department of Chemistry, Taiyuan Normal University, 030031, Taiyuan, China.

^c Center for Energy, School of Mechanical and Chemical Engineering, The University of Western Australia, Crawley WA 6009, Australia. E-mail: ken.marsh@uwa.edu.au

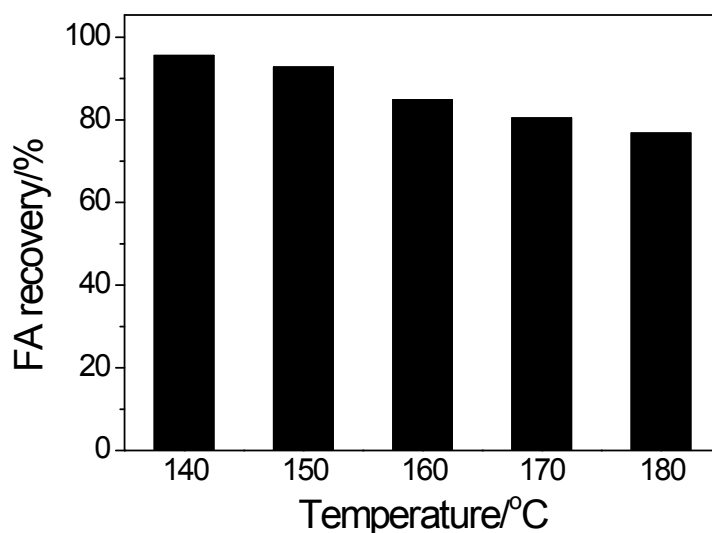


Fig. S1 The FA recovery in the catalytic system at different temperatures. Conditions: FA, 0.05 g; H₂SO₄, mass fraction $w = 2\%$; NaVO₃, $w = 0.35\%$; H₂O, 6.0 cm³; O₂, 3 MPa; time, 5 min.

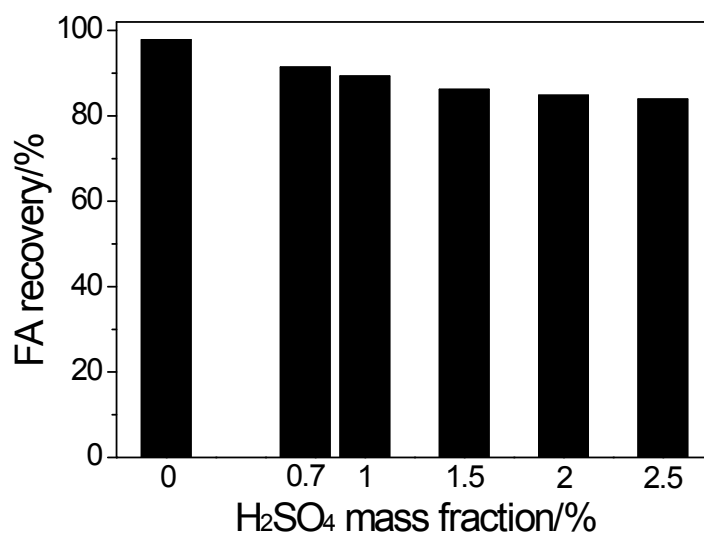


Fig. S2 The FA recovery in the catalytic system at different H₂SO₄ mass fractions. Conditions: FA, 0.05 g; NaVO₃, *w* = 0.35 %; H₂O, 6.0 cm³; O₂, 3 MPa; temperature, 160 °C; time, 5 min.

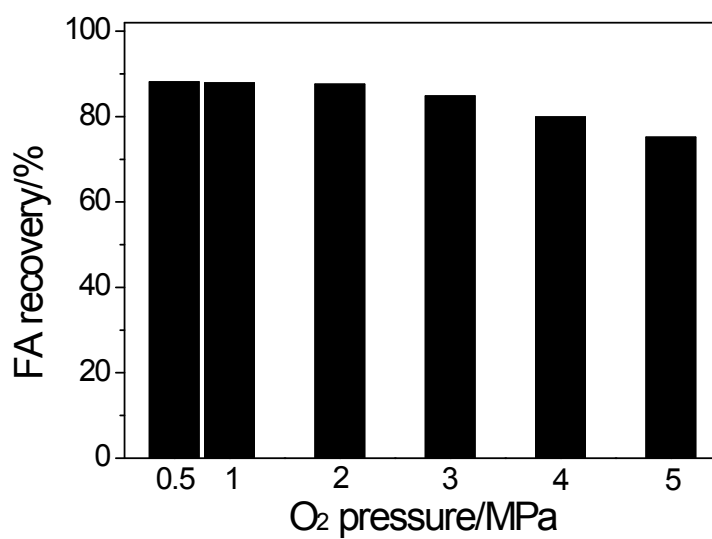


Fig. S3 The FA recovery in catalytic system at different O₂ pressures. Conditions: FA, 0.05 g; H₂SO₄, *w* = 2 %; NaVO₃, *w* = 0.35 %; H₂O, 6.0 cm³; temperature, 160 °C; time, 5 min.