Hydrothermal Growth and Characterization of Length Tunable Porous Iron Vanadates One-dimensional Nanostructures

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Fig. S1 SEM images of the A-FeV$_x$O$_y$-4 (a) and A-FeV$_x$O$_y$-6 (b) 1-D nanostructures.
Fig. S2 HRTEM images of the A-FeV$_x$O$_y$-4 (a), A-FeV$_x$O$_y$-5 (b) and A-FeV$_x$O$_y$-6 (c) 1-D nanostructures.
Fig. S3 Thermal analysis (a) and DSC analysis (b) of FeVₓOᵧ₄ and FeVₓOᵧ₆.
Fig. S4 XRD patterns evolution of FeV$_x$O$_y$-6 at different synthesis stages.
Fig. S5 Morphological evolution of FeV$_2$O$_4$ 1-D nanostructure at different synthesis stages, starting from the precursor nanoparticles (0h) and followed by 1h, 3h and 24 h hydrothermal treatment of the precursors.
Fig. S6 FESEM images of FeV$_x$O$_y$ 1-D nanostructures prepared at pH values of 2.0 (a) and 7.0 (b).
Fig. S7 Selectivity towards N₂ as a function of temperature in the feed gas of 250 mL/min total rate, 500ppm NO, 500ppm NH₃, 3%O₂, and N₂ balance, GHSV=20000 h⁻¹.