

Supporting information

Generation of multi-valence Cu_xO by reduction with the activated semi-coke and their collaboration in the selective reduction of NO with NH₃

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N₂ selectivity.

The N₂ selectivity of SCR process can be calculated according to the concentration of inlet and outlet gases stream, as follows:

$$N_2 \text{ selectivity (\%)} = \left(1 - \frac{[NO]_{out}}{[NO]_{in} - [NO]_{out}} \right) \times 100\%$$

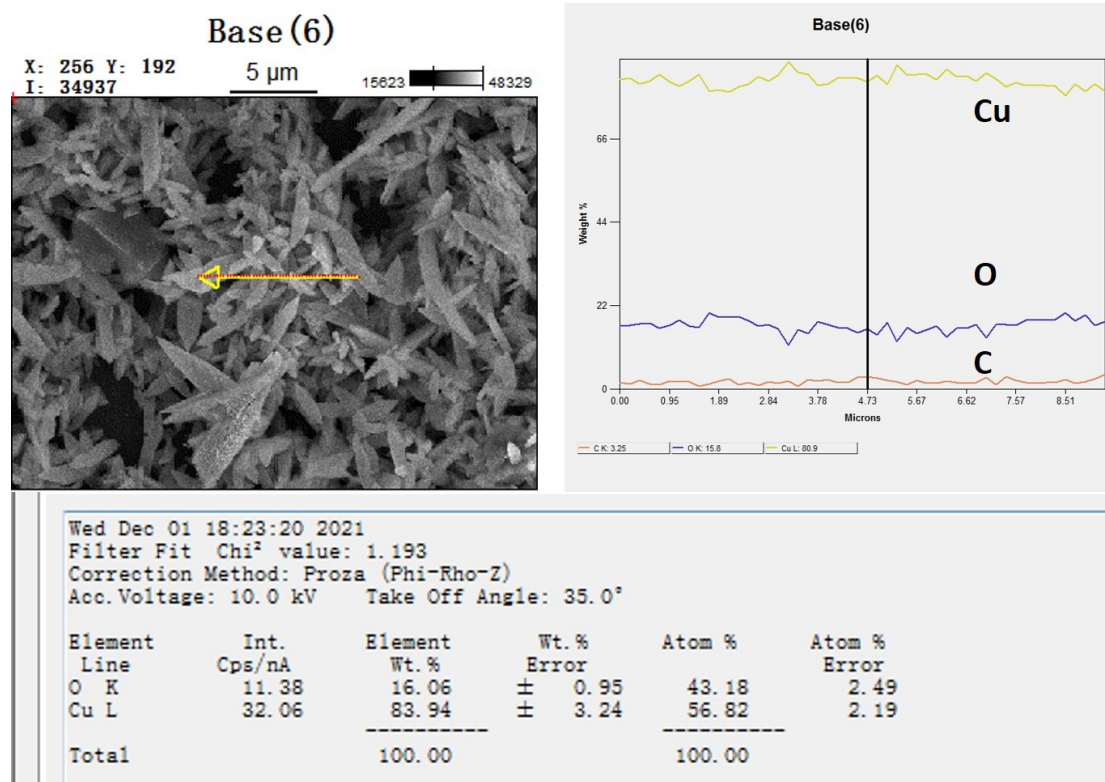


Figure S1. Elemental distribution of the best-performant catalyst (Cu1.0-350).

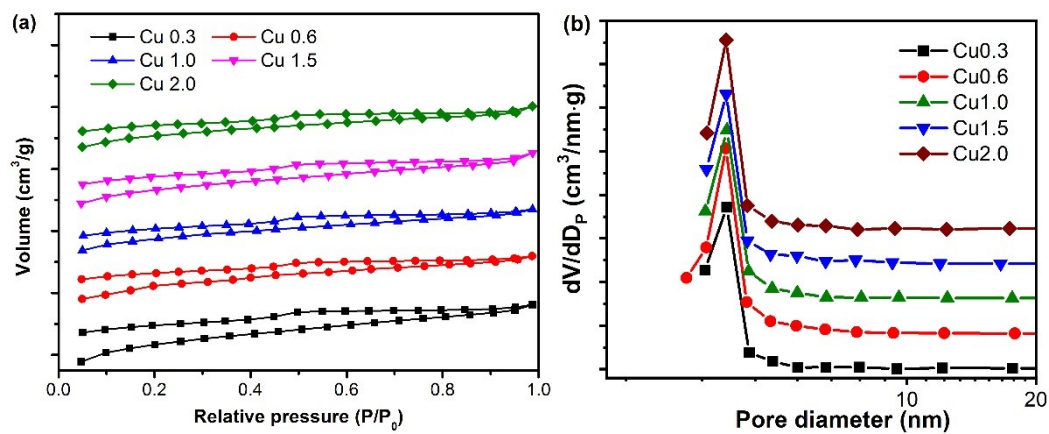


Figure S2. (a) N_2 adsorption isotherms and (b) BJH pore size distributions of these catalysts with different Cu loading.

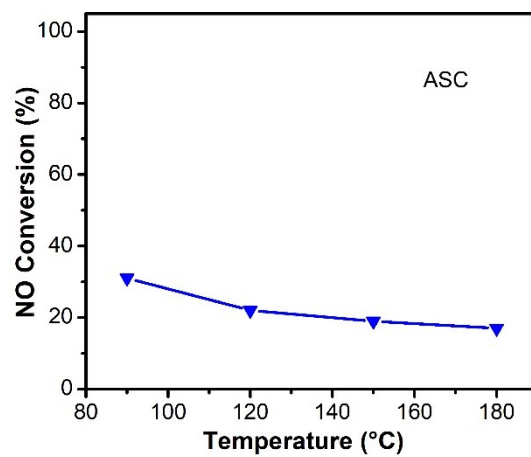


Figure S3. Reaction activity of the ASC.

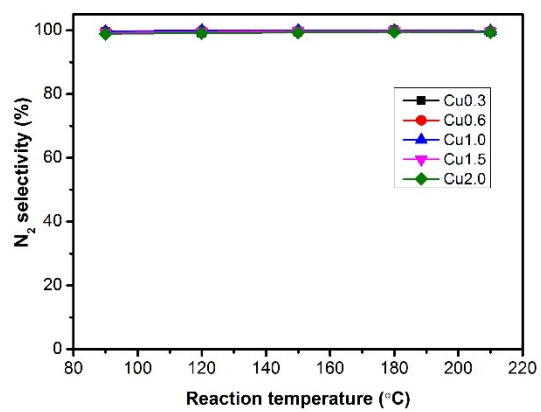


Figure S4. N₂ selectivity of these catalysts with different Cu loading.

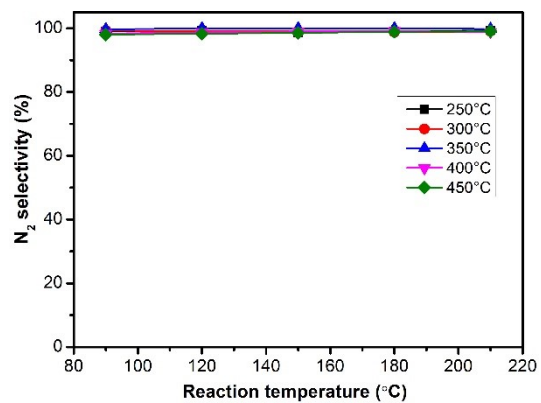


Figure S5. N₂ selectivity of these catalysts under different calcination temperature.