Tin oxide nanoparticles modified by copper as novel catalysts for luminol–H_2O_2-based chemiluminescence system

Christina Vakh, Aleksei Pochivalov, Anastasiia Podurets, Natalia Bobrysheva,

Olga Osmolovskaya, Andrey Bulatov

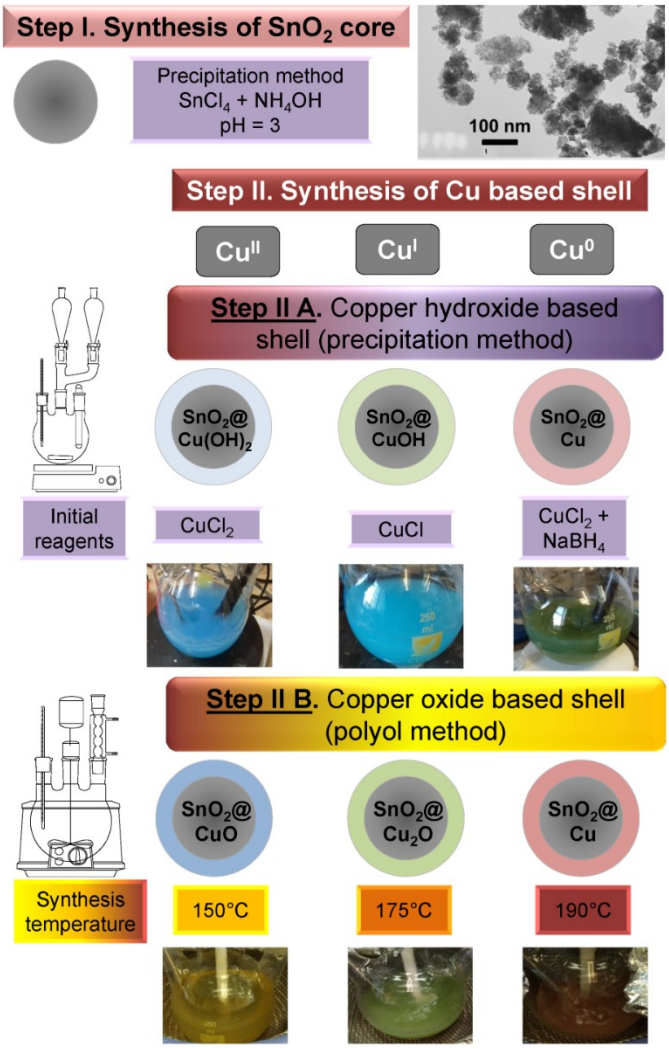
Institute of Chemistry, Saint-Petersburg University, St.Petersburg State University, SPbSU, SPbU,

7/9 Universitetskayanab., St. Petersburg,199034 Russia

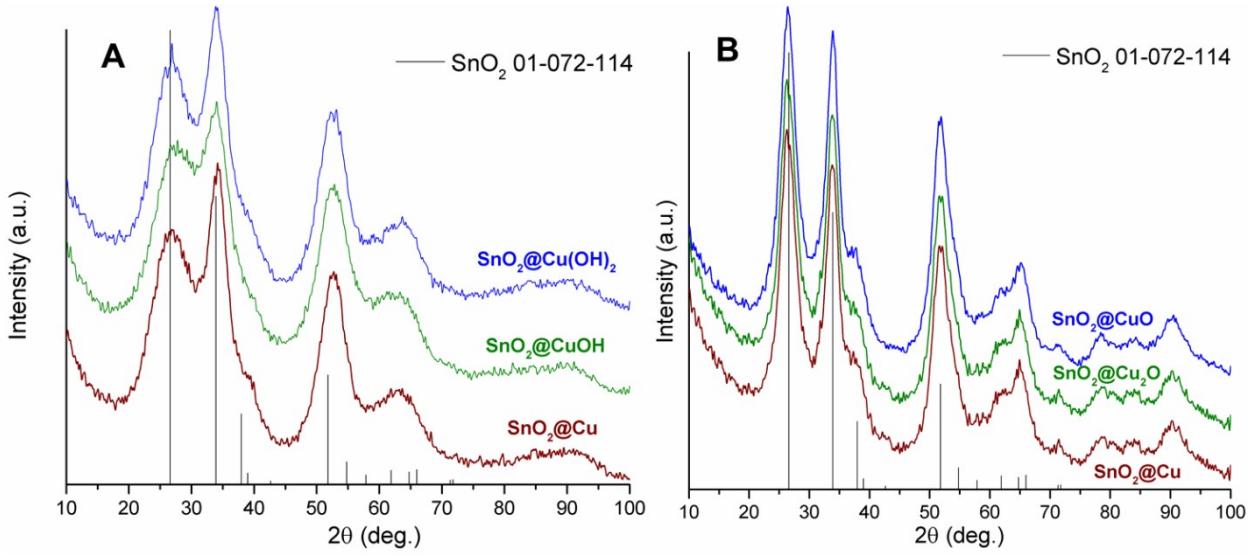
*Corresponding author. Tel.: +7-929-110-0987; fax: +7-812-372-4421.

E-mail address: k.vakh@spbu.ru; *kristina-fulmes@mail.ru* (Ch. Vakh)

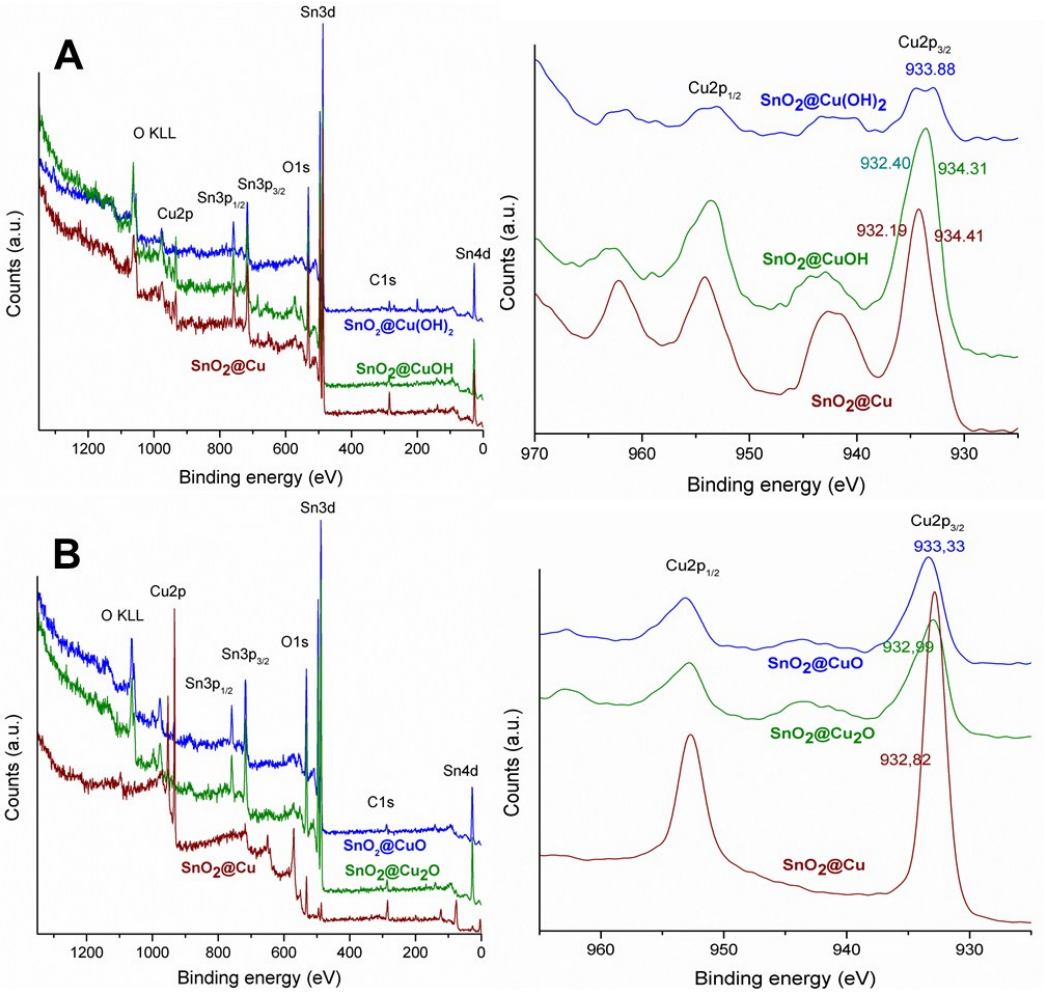
Electronic supplementary information



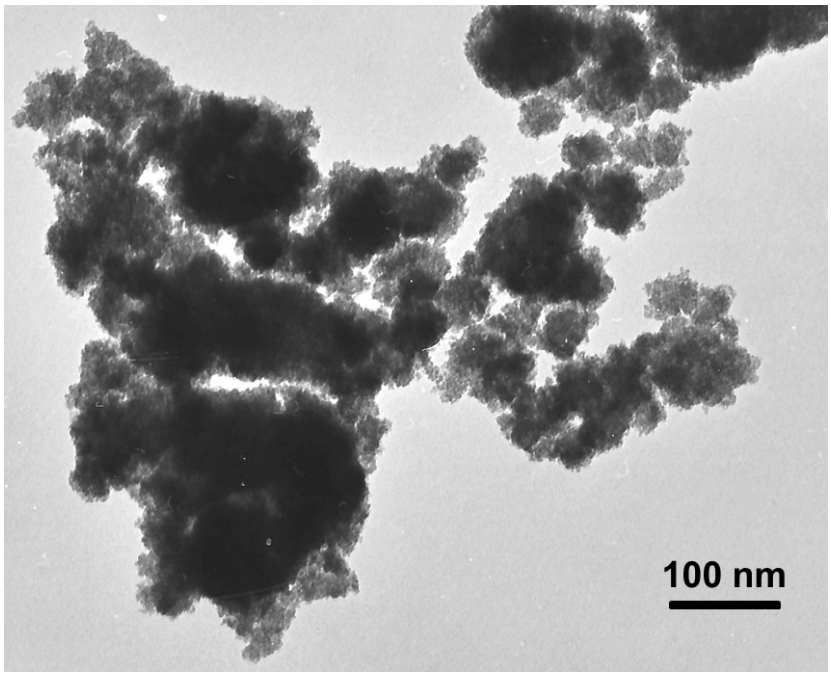
ESI Fig. 1. Synthesis schema of the SnO_2 nanoparticles modified by cooper.



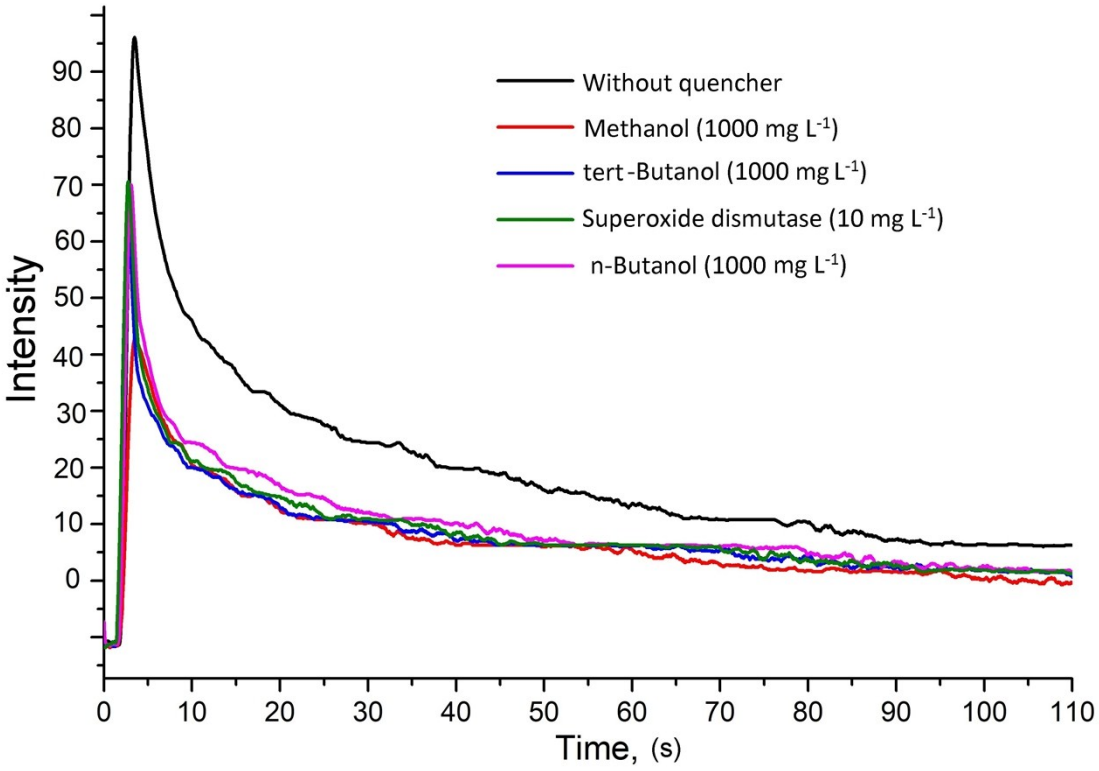
ESI Fig. 2. XRD pattern of SnO_2 nanoparticles (line) modified by copper obtained by precipitation (A) and polyol (B) methods and International Center for Diffraction Data - Powder Diffraction File for SnO_2 (bar).



ESI Fig. 3. XRS spectra pattern for SnO_2 nanoparticles modified by copper obtained by precipitation (A) and polyol (B) methods: full spectrum (left) and copper 2p spectral area (right).



ESI Fig. 4. TEM image of SnO_2@Cu_2O NPs (SSA = 260 m^2 g^{-1}).



ESI Fig. 5. The effect of radical quenchers ($C_{luminol}$=0.2 mmol L^{-1}, C_{H2O2}= 0.01 mol L^{-1}, C_{NPs}= 100 mg L^{-1}).