**Supplementary materials**

**Visible – light driven systems: effect of the parameters affecting hydrogen production through photoreforming of organics in presence of Cu2O/TiO2 nanocomposite photocatalyst**

**M. Muscetta (1),\***, **L. Clarizia (1),\*, M. Race(2), R. Andreozzi(1), R. Marotta(1), I. Di Somma(3)**

*(1) Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, Scuola Politecnica e delle Scienze di Base, Università di Napoli Federico II, Italia.*

*(2) Dipartimento di Ingegneria Civile e Meccanica, Università degli Studi di Cassino e del Lazio Meridionale, Italia.*

*(3) Istituto di Scienze e Tecnologie per l’Energia e la Mobilità Sostenibili (CNR), Napoli, Italia.*

*\*Corresponding authors:* *marica.muscetta@unina.it* *(M. Muscetta);*

 *laura.clarizia2@unina.it*  *(L. Clarizia).*

**Materials**

TiO2 nanopowder (commercial grade, Aeroxide TiO2-P25, average particle size 21 nm, specific surface area 50 ± 15 m2⋅g-1, 80/20 anatase/rutile), ethanol (absolute, ≥99.8%), glycerol (ACS reagent, ≥99.5%), formic acid (puriss. p.a., ACS reagent, ≥98%), lactic acid (85%, FCC), ethylene glycol (anhydrous, 99.8%) were purchased from Sigma Aldrich, while cuprous oxide (Cu2O, powder) and methanol (99.9%) are purchased from Carlo Erba Reagents. All reagents are used as received. Doubly glass–distilled water is used.

**Experimental set – up**

The reactor is equipped with a lamp located in a quartz sleeve. Using a thermostat, the temperature of the reactor is changed between 20 and 80 °C. A high-pressure Hg lamp is adopted as a radiation source for the experiments. The UV (305, 313, and 366 nm) and visible (404.7 nm and 438.8 nm) specific powers of the lamp were determined elsewhere (Muscetta et al., 2022).