### Accepted Manuscript

Title: Reverse Ostwald ripening process induced dispersion of Cu<sub>2</sub>O nanoparticles in silver-matrix and their interfacial mechanism mediated sunlight driven photocatalytic properties

Authors: M. Sakar, S. Balakumar

PII: S1010-6030(17)31727-6

DOI: https://doi.org/10.1016/j.jphotochem.2017.12.040

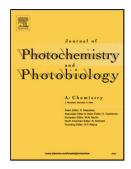
Reference: JPC 11078

To appear in: Journal of Photochemistry and Photobiology A: Chemistry

Received date: 22-11-2017 Revised date: 15-12-2017 Accepted date: 27-12-2017

Please cite this article M.Sakar, S.Balakumar, Reverse Ostwald as: ripening process induced dispersion of Cu2O nanoparticles in silvermatrix mechanism and their interfacial mediated sunlight driven photocatalytic properties, Journal of Photochemistry and Photobiology A: Chemistry https://doi.org/10.1016/j.jphotochem.2017.12.040

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## ACCEPTED MANUSCRIPT

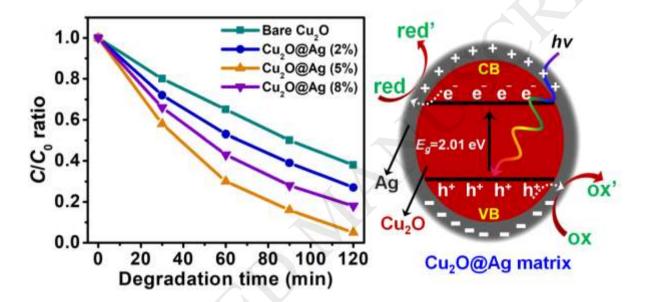
## Reverse Ostwald ripening process induced dispersion of Cu<sub>2</sub>O nanoparticles in silvermatrix and their interfacial mechanism mediated sunlight driven photocatalytic properties

M. Sakar and S. Balakumar\*

National Centre for Nanoscience and Nanotechnology, University of Madras, Guindy Campus, Chennai 600 025, India

\*Email: <u>balasuga@yahoo.com</u>

#### **Graphical abstract**



#### **Highlights**

- Cu<sub>2</sub>O NPs dispersed in Ag-matrix has been synthesized through a facile method
- 3D contact between Cu<sub>2</sub>O and Ag matrix facilitated the enhanced photocatalytic activity
- Their mechanism is found to be the simultaneous direct energy transfer and plasmoninduced resonant energy transfer processes
- Cu<sub>2</sub>O@Ag matrix is an effective configuration as compare to the other conventional point-contact based plasmonic photocatalysts

#### **Abstract**

#### Download English Version:

# https://daneshyari.com/en/article/6492644

Download Persian Version:

 $\underline{https://daneshyari.com/article/6492644}$ 

**Daneshyari.com**