Effect of capping methods on morphology of silver nanoparticles: A study on medium-induced release of silver from nanocomposite β -cyclodextrin/alginate

Thanh-Danh Nguyen^{a,b*}, Thanh-Truc Vo^{b,c}, T. Thanh-Tam Huynh^b, Cao-Hien Nguyen^{c,d}, Van-Dat Doan^e, Dinh-Truong Nguyen^f, Trinh-Duy Nguyen^g and Chi-Hien Dang^{b,c}

^aInstitute of Research and Development, Duy Tan University, Da Nang City, Viet Nam.

^bInstitute of Chemical Technology, Vietnam Academy of Science and Technology, 1 Mac Dinh Chi Street, District 1, Ho Chi Minh City, Viet Nam.

^cGraduate University of Science and Technology, Vietnam Academy of Science and Technology, 18 Hoang Quoc Viet, Cau Giay, Hanoi, Viet Nam.

^dDepartment of Chemical Technology, Ho Chi Minh City University of Food Industry, Ho Chi Minh, Viet Nam.

^eFaculty of Chemical Engineering, Industrial University of Ho Chi Minh city, Ho Chi Minh city, Viet Nam.

^fSchool of Biotechnology, Tan Tao University, Long An Province, Viet Nam.

gCenter of Excellence for Green Energy and Environmental Nanomaterials,
Nguyen Tat Thanh University, Ho Chi Minh City 755414, Vietnam.

*Corresponding author: Thanh-Danh Nguyen, Fax: (+84)-8.38238265;

Email: danh5463bd@yahoo.com

Supplementary Data

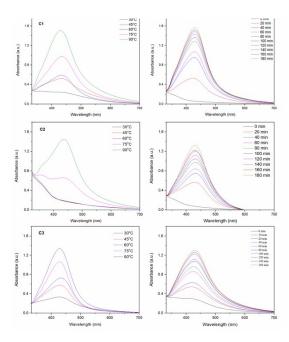


Figure S1. UV-Vis Spectra of samples for optimization of reaction temperature (left) and time (right).

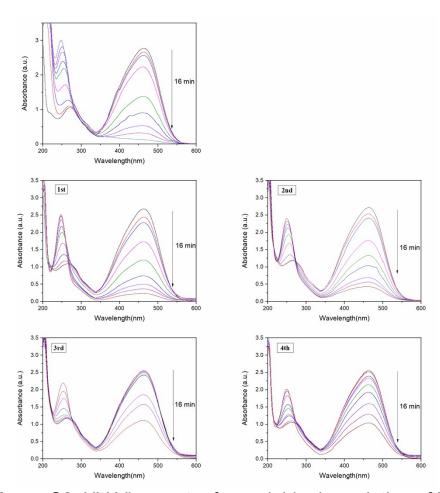


Figure S2. UV-Vis spectra for cyclable degradation of MO using the catalyst C1

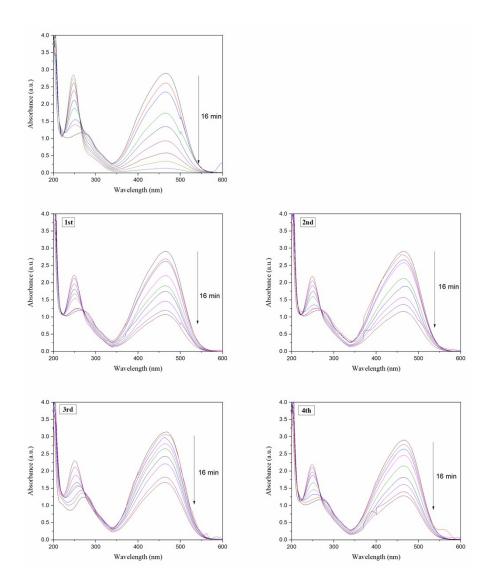


Figure S3. UV-Vis spectra for cyclable degradation of MO using the catalyst C2

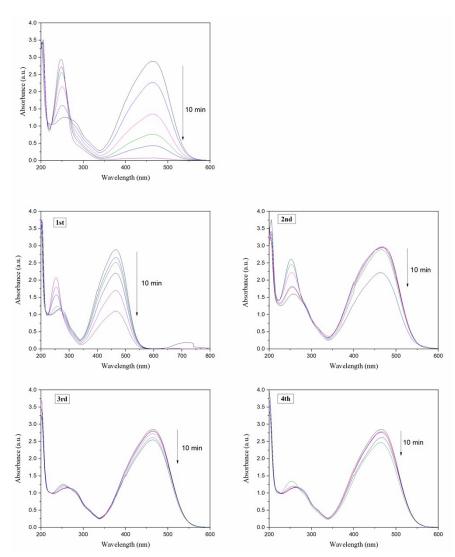


Figure S4. UV-Vis spectra for cyclable degradation of MO using the catalyst **C3**

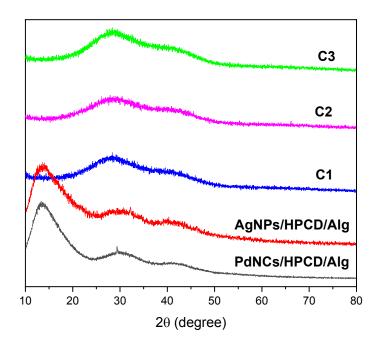


Figure S5. XRD spectra of all samples. There are no characteristic peaks of crystalline metallic nanomaterials.

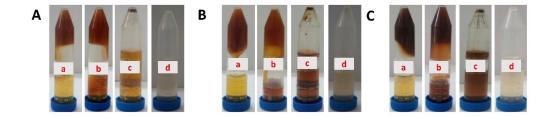


Figure S6. Photography of samples C1 (A), C2 (B) and C3 (C) at different pHs: pH4 (a), pH7 (b), pH10a (c) and pH10b (d).

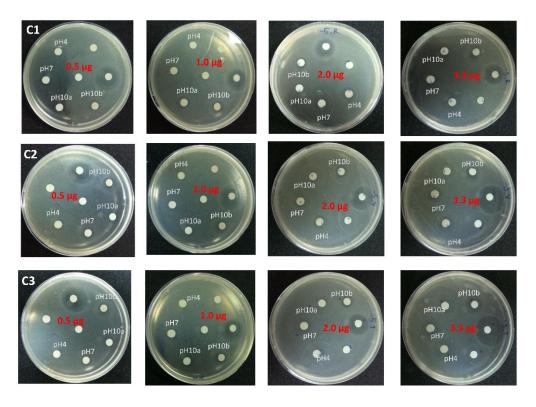


Figure S7. Photography for test of antibacterial activity against *E. coli*