

Supporting Information

Screen-printed p-n BiOCl/BiFeO₃ heterojunctions for efficient photocatalytic degradation of Rhodamine B

*Paul Fourmont and Sylvain G. Cloutier**

P.F., S.G.C.

École de Technologie Supérieure, Electrical department, 1100 Notre Dame Street West,
Montreal, Quebec H3C 1K3, Canada, *E-mail: sylvaing.cloutier@etsmtl.ca

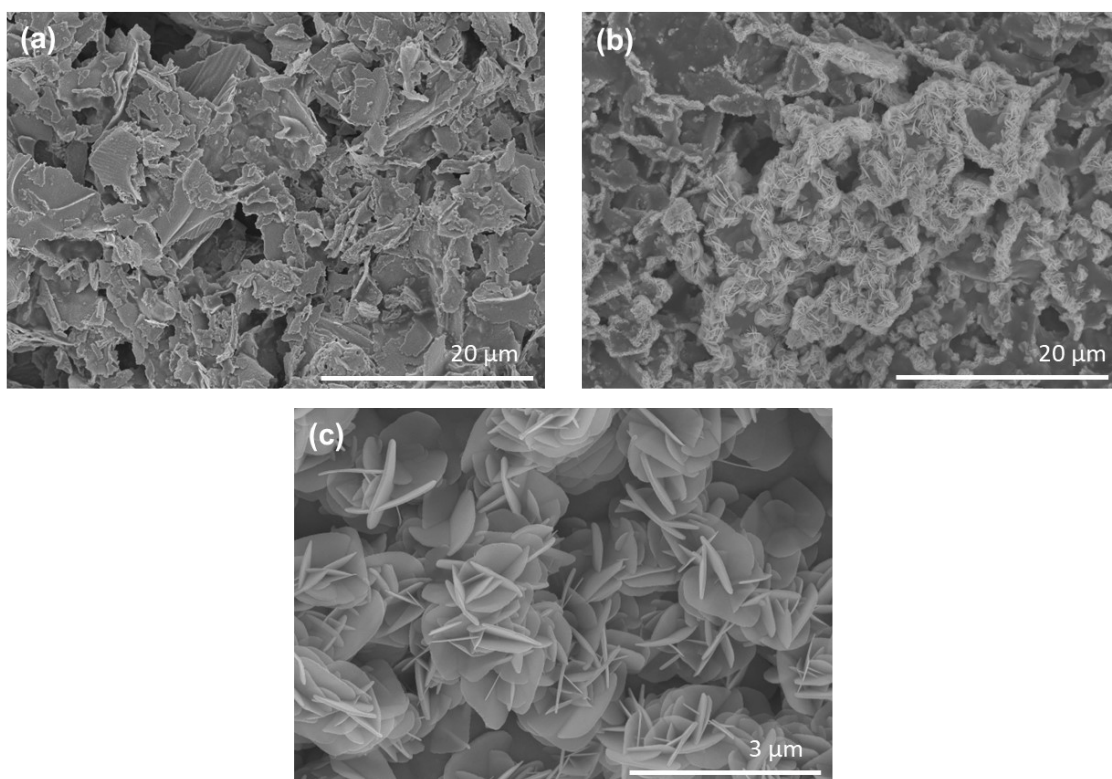


Figure S1. SEM micrographs of the screen-printed photocatalytic cells (a) before annealing and (b-c) after annealing at 300 °C.

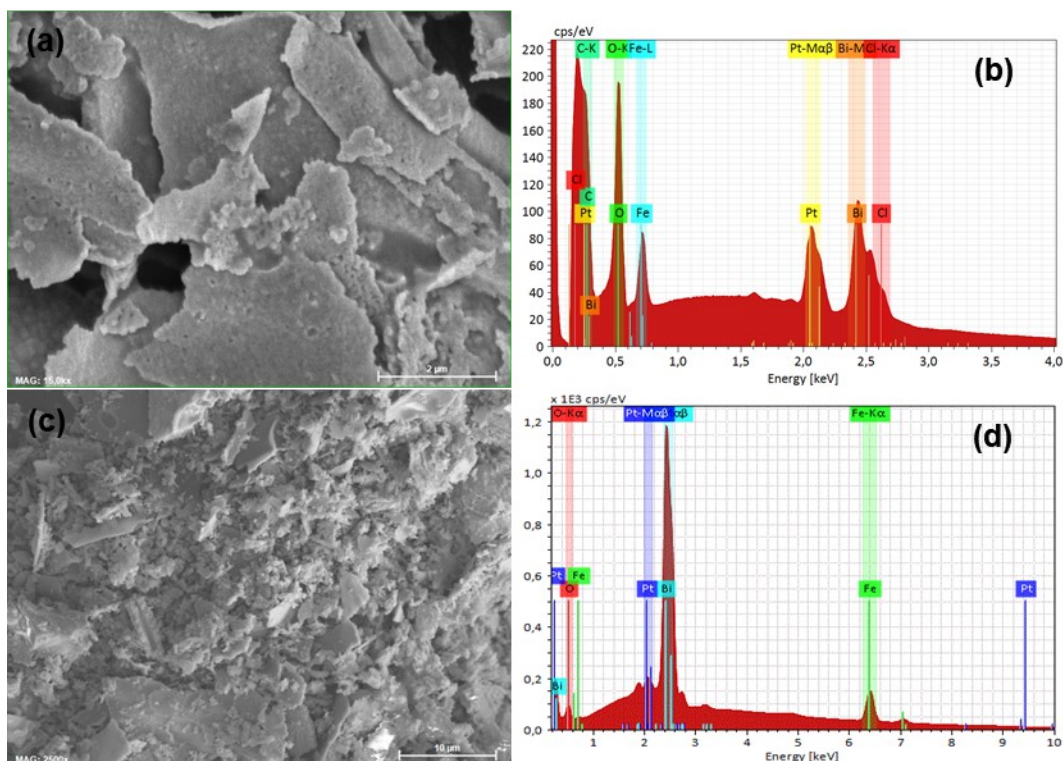


Figure S2. (a) SEM micrograph of the screen-printed photocatalytic cell. (b) EDX spectra of the micrograph shown in (a). (c) SEM micrograph of the BFO particles. (d) EDX spectra of the micrograph shown in (c).

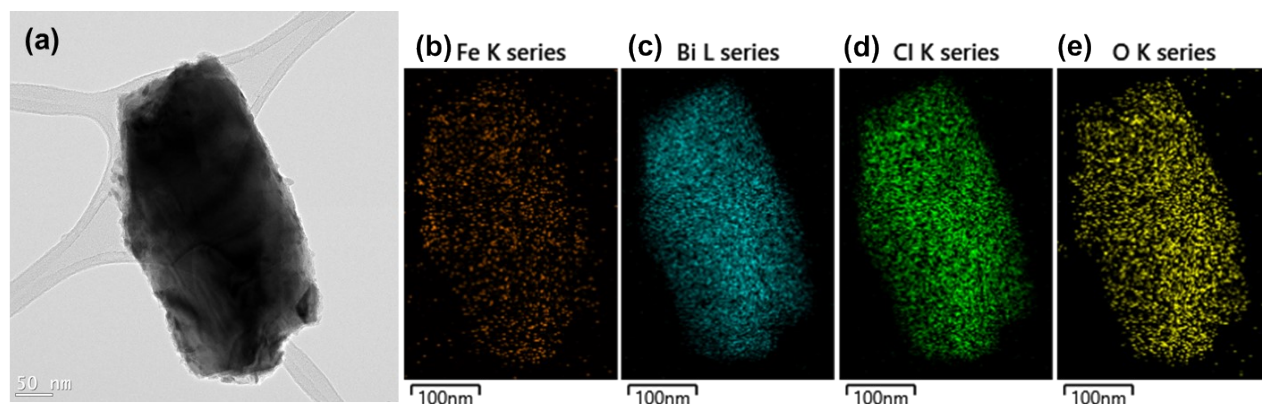


Figure S3. (a) TEM image of the screen-printed photocatalytic cell. Images (b-d) show elemental maps of iron, bismuth, chlorine and oxygen respectively.

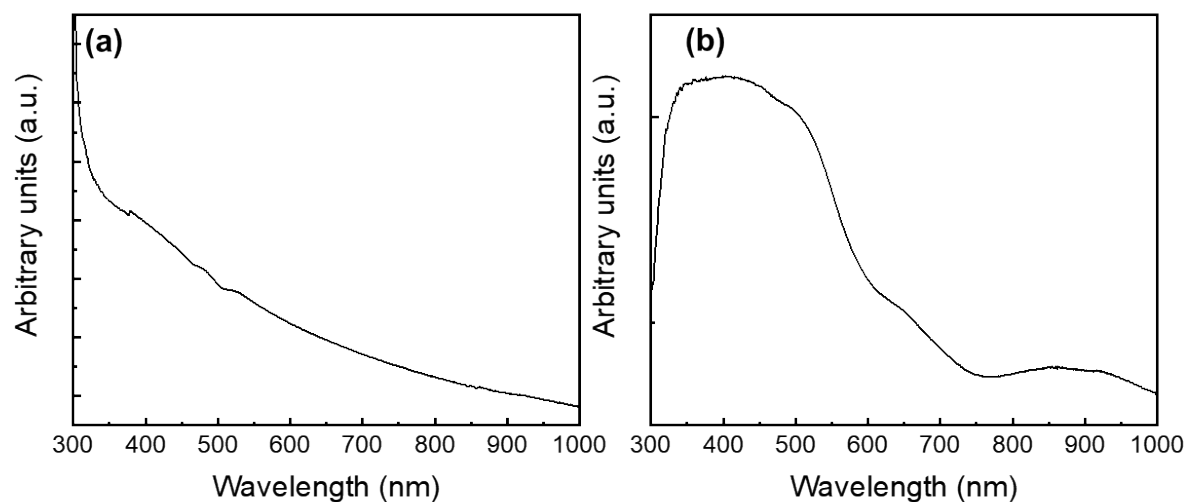


Figure S4. UV-Vis-NIR measurements of (a) BiOCl nanosheets with iron atoms inclusions and (b) screen-printed photocatalytic cell before annealing.

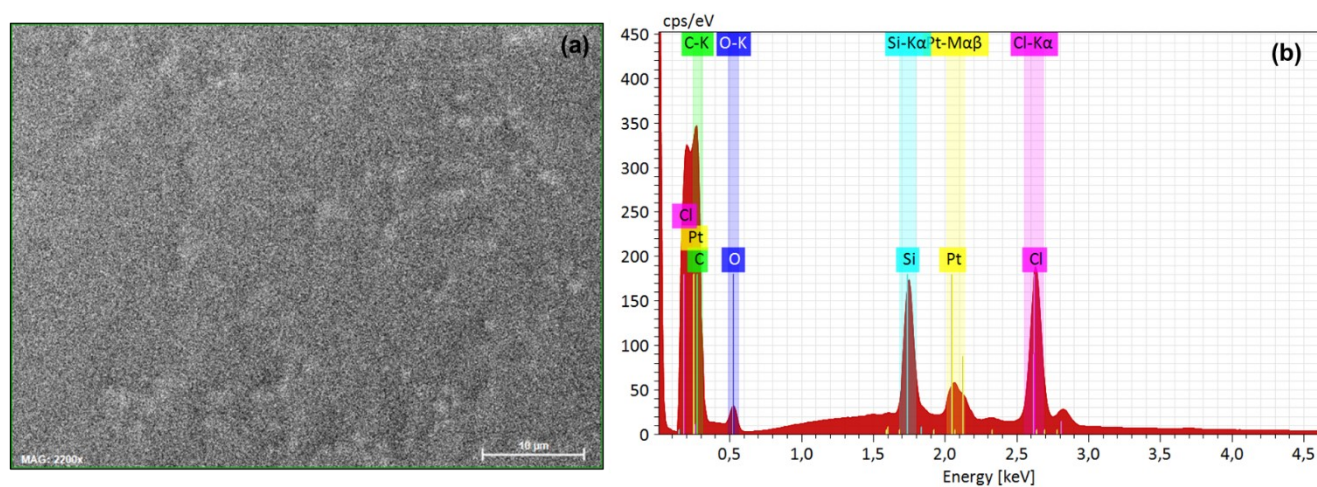


Figure S5. (a) SEM micrograph of the ink vehicle on a silicon wafer after annealing at 300 °C for 1 hour (b) EDX spectrum of micrograph shown in (a).

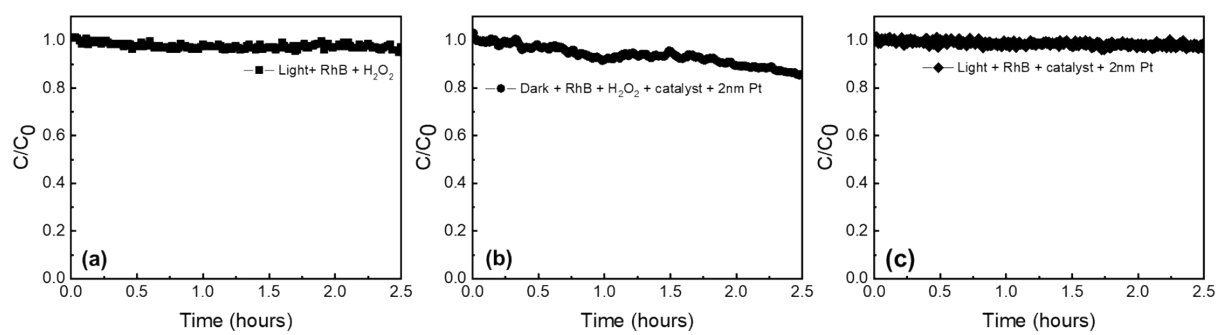


Figure S6. (a) Evaluation of photolysis proving that light and H_2O_2 are not degrading RhB (b) RhB degradation under dark conditions (c) RhB degradation without H_2O_2 .