**TiO2/ZnO: Type-II Heterostructures for Electrochemical Crystal Violet Dye Degradation Studies**

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**Supplementary Material**

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***Fig. S1: Electrochemical measurement set up (3-probe measurements)***

*Electrochemical analysis tests*

Cyclic voltammetry experiments were carried out at room temperature using Potentiostat (K-lyte 1.0). The cell used for voltammetric experiments was three-electrode type with Ag/AgCl as reference electrode, Pt mesh as counter electrode as shown in Fig S1.The electrocatalysts TiO2, ZnO are fabricated on Ti Substrate as working electrodes (Ti/TiO2, Ti/ZnO and Ti/TiO2/ZnO) with 0.1 M Na2SO4 solution as supporting electrolyte. Voltammetric studies were performed at different fixed voltages of 0.6V, 1.2V, 1.2V, 1.3V, 1.2V, and 1.0V for Bare Ti, Ti/TiO2, Ti/ZnOand Ti/TiO2/ZnO respectively at a scan rate of 0.05 V/s. These are the potentials where the oxidation peak hump begins. Dye concentration of 55 mg/L was selected for all experiments.

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***Fig. S2: EDAX spectra of TiO2 & ZnO samples***

The EDAX spectra taken for TiO2 and ZnO samples (Fig S2). The spectra confirms presence of both elements Ti, O, and Zn in electrode assemblies.

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| **S. No** | **Name of the electrode assembly** | **Time in attaining 80 % decolorization, hrs** |
| 1 | Bare Ti | 12 |
| 2 | Ti/ZnO | 10.5 |
| 3 | Ti/TiO2 | 9 |
| 4 | Ti/ TiO2/ZnO | 6.5 |

**Table S1**: Time in attaining 80 % decolorization for various electrode assemblies