The morphology, dimension (length and diameter), band gap energy, textural properties and photocatalytic performance of undoped, Ag- and Ni/ZnO (NA= not applicable).

| Sample         | Morphology                          | Average length, L (nm) | Average diameter, D (nm) | Band Gap (eV) | $a_{BET}$ (m$^2$g$^{-1}$) | Total pore volume (cm$^3$g$^{-1}$) | Average pore diameter (nm) | Percentage degradation, (%) after 160 minutes | Photodegradation rate constant, (k, min$^{-1}$) | $R^2$   |
|----------------|-------------------------------------|------------------------|--------------------------|---------------|--------------------------|-----------------------------------|-----------------------------|-----------------------------------------------|-----------------------------------------------|--------|
| Undoped ZnO   | Mixture of long nanorods and spherical shapes | 242.06                 | 66.01                    | 3.29          | 11.671                   | 0.1618                            | 55.448                      | 77.66                                         | 0.0088                                        | 0.9824 |
| 1% Ag/ZnO     | Mixture of long nanorods and spherical shapes | 253.87                 | 65.65                    | 3.32          | 10.818                   | 0.1641                            | 60.694                      | 98.65                                         | 0.0237                                        | 0.9408 |
| 3% Ag/ZnO     | Mixture of long nanorods and spherical shapes | 241.21                 | 72.37                    | 3.32          | 10.003                   | 0.1405                            | 56.163                      | 98.00                                         | 0.0206                                        | 0.9074 |
| 5% Ag/ZnO     | Mixture of long nanorods and spherical shapes | 275.93                 | 76.06                    | 3.33          | 10.175                   | 0.1339                            | 52.656                      | 99.93                                         | 0.0394                                        | 0.9112 |
| 7% Ag/ZnO     | Mixture of long nanorods and spherical shapes | 212.48                 | 76.11                    | 3.33          | 10.718                   | 0.1688                            | 62.993                      | 98.59                                         | 0.0245                                        | 0.9714 |
| 10% Ag/ZnO    | Mixture of long nanorods and spherical shapes | 209.95                 | 76.13                    | 3.32          | 9.7801                   | 0.1363                            | 55.736                      | 97.47                                         | 0.0233                                        | 0.9624 |
| Ni/ZnO   | Description                                      | 1% Ni/ZnO | 3% Ni/ZnO | 5% Ni/ZnO | 7% Ni/ZnO | 10% Ni/ZnO |
|----------|--------------------------------------------------|-----------|-----------|-----------|-----------|------------|
|          |                                                  | 215.63    | 185.76    | 185.12    | 151.86    | NA         |
|          | Mixture of long nanorods and spherical shapes    | 68.53     | 68.02     | 66.98     | 63.27     | 96.15      |
|          |                                                  | 3.30      | 3.32      | 3.33      | 3.34      | 3.35       |
|          |                                                  | 11.97     | 12.28     | 13.62     | 13.80     | 14.20      |
|          |                                                  | 0.1730    | 0.1744    | 0.1898    | 0.1825    | 0.1958     |
|          |                                                  | 57.828    | 56.786    | 55.707    | 51.385    | 56.754     |
|          |                                                  | 31.68     | 11.12     | 15.07     | 12.11     | 13.44      |
|          |                                                  | 0.0029    | 0.0007    | 0.001     | 0.0007    | 0.001      |
|          |                                                  | 0.7301    | 0.9633    | 0.9997    | 0.8559    | 0.9702     |
