|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Ref.** | **Energy band gap (eV)** | **Reaction temperature (C)** | **Calcination temperature (C)** | **Reaction hour (hr)** | **Calcination hour (hr)** | **Synthesis method** | **Precursor** | **pH** | **Precursor concentration (M)** | **Model predictions (nm)** | **Actual observations (nm)** |
| [1] | 2.67 | 60 | 400 | 1 | 2 | Green | Zinc nitrate |  | 0.34 | 35.56 | 35 |
| [2] | 3.0 | 70 | 600 | 2 | 2 | Green | Zinc nitrate | 4.5 | 0.04 | 33.03 | 25 |
| [3] | 2.7 | 80 | 150 | 2 | 3 | Green | Zinc nitrate | 8 | 0.1 | 41.79 | 39.4 |
| [3] | 2.692 | 80 | 250 | 2 | 3 | Green | Zinc nitrate | 8 | 0.1 | 40.97 | 44.7 |
| [3] | 2.672 | 80 | 350 | 2 | 3 | Green | Zinc nitrate | 8 | 0.1 | 39.85 | 51.23 |
| [3] | 2.645 | 80 | 450 | 2 | 3 | Green | Zinc nitrate | 8 | 0.1 | 48.41 | 51.86 |
| [4] | 3.179 | 80 | 600 | 6 | 2 | Sol-gel | Zinc nitrate |  | 1.17 | 43.94 | 30 |
| [4] | 3.156 | 80 | 600 | 6 | 2 | Sol-gel | Zinc nitrate |  | 1.17 | 42.63 | 40 |
| [5] |  | 60 | 400 | 4 | 4 | Green | Zinc nitrate |  |  | 30.99 | 26 |
| [6] | 3.28 | 150 | 60 | 6 | 10 | Solvothermal | Zinc acetate | 8.5 |  | 26.6 | 27 |
| [6] | 3.28 | 175 | 60 | 6 | 10 | Solvothermal | Zinc acetate | 8.5 |  | 26.8 | 21.7 |
| [6] | 3.28 | 200 | 60 | 6 | 10 | Solvothermal | Zinc acetate | 8.5 |  | 26.4 | 16.9 |
| [7] | 3.99 | 50 |  | 6 |  | Green | Zinc acetate |  | 0.001 | 46.02 | 50 |
| [8] | 3.25 | 100 | 550 |  | 5 | Green | Zinc acetate | 7 | 0.001 | 42.29 | 40 |
| [9] | 2.82 | 80 | 120 | 0.17 |  | Green | Zinc nitrate |  | 0.1 | 44.73 | 50 |
| [10] | 3.24 |  | 400 |  | 1 | Green | Zinc acetate | 7 |  | 31.47 | 27.81 |
| [11] | 3.31 |  | 500 | 0.33 | 2 | Green | Zinc nitrate | 3.9 |  | 42.69 | 49.44 |
| [12] | 3.46 | 100 | 800 |  |  | Green | Zinc acetate |  | 0.2 | 37.25 | 40 ± 3 |
| [13] | 3.1 | 75 | 400 | 2 | 4 | Green | Zinc nitrate |  | 0.1 | 28.58 | 25 |
| [14] | 3.15 |  | 500 |  | 3 | Green | Zinc nitrate |  |  | 39.99 | 40 |

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