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## ABBREVIATIONS AND SYMBOLS

| | |
|---|---|
| $A^o$ | Angstrom |
| BET | Brunauer-Emmett-Teller |
| BJH | Barrett-Joiner-Halenda |
| °C | Degree Celsius |
| CL | Cathodoluminescence |
| $d_{BET}$ | Average BET-equivalent particle diameter |
| $d_{hkl}$ | Interplanar distance between (hkl) planes |
| eV | Electron Volt |
| EDS,EDXS | Energy Dispersive X-ray Spectroscopy |
| $E_b$ | Direction band gap |
| $E_g$ | Optical band gap of the semiconductor |
| $E_{UV}$ | UV emission energy |
| EBIC | Electron beam induced current |
| EBSD | Electron backscatter diffraction |
| EELS | Electron energy loss analysis |
| FIB | Focused ion beam |
| FSP | Flame Spray Pyrolysis |
| h | Plank's constant ($6.63\times10^{-34}$ Js) |
| hν | Photon energy |
| HRTEM | High Resolution Transmission Electron Microscopy |
| ICDD | International Center for Diffraction Data |
| JCPDS | Joint Committee Powder Diffraction Standards |
| K | Kelvin |
| mg | Milligram |
| ml | Milliliter |

| | |
|---|---|
| nm | Nanometer ($10^{-9}$ m) |
| $N_a$ | Avogadro's number ($6.02 \times 10^{23}$) |
| PDF | Powder Diffraction File |
| PL | Photoluminescence |
| PLD | Pulsed laser deposition |
| SEM | Scanning Electron Microscopy |
| SSA | Specific Surface Area |
| $SSA_{BET}$ | Specific surface area from BET method |
| TEM | Transmission Electron Microscopy |
| UV | Ultraviolet |
| XRD | X-ray diffraction |
| λ | Wavelength |
| μg | Microgram ($10^{-6}$ g) |
| μm | Micron ($10^{-6}$ meter) |
| θ | Bragg angle for the reflection |
| ν | Frequency |