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ABBREVIATIONS AND SYMBOLS

Abbreviations

| CB | conduction band |
|---|--|
| DSSC | dye-sensitized solar cell |
| FF | fill factor |
| IPCE | incident photon to current efficiency |
| IR | infrared |
| ITO | indium tin oxide |
| IV | current-voltage |
| TBP | 4- <i>tert</i> -butylpyridine |
| UV | ultraviolet |
| VB | valence band |
| <u>Symbols</u> | |
| | |
| e | electron |
| e ⁻ η | electron overall energy conversion efficiency |
| e ⁻ η hv | electron overall energy conversion efficiency light quantum |
| e ⁻ η hv I _{mp} | electron overall energy conversion efficiency light quantum current at the maximum power point |
| e ⁻ η hv I _{mp} I _{sc} | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current |
| e^{-1} η hv I_{mp} I_{sc} P_{light} | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light |
| e^{-1} η hv I_{mp} I_{sc} P_{light} P_{max} | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light power at the maximum power point |
| e^{-1} η hv I_{mp} I_{sc} P_{light} P_{max} S | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light power at the maximum power point sensitizer |
| e^{-} η hv I_{mp} I_{sc} P_{light} P_{max} S S^* | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light power at the maximum power point sensitizer excited energy state of the sensitizer |
| e^{-1} η hv I_{mp} I_{sc} P_{light} P_{max} S S^{*} S^{+} | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light power at the maximum power point sensitizer excited energy state of the sensitizer oxidized state of the sensitizer |
| e^{-} η hv I_{mp} I_{sc} P_{light} P_{max} S S^{*} S^{+} S^{0} | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light power at the maximum power point sensitizer excited energy state of the sensitizer oxidized state of the sensitizer ground energy state of the sensitizer |
| e^{-} η hv I_{mp} I_{sc} P_{light} P_{max} S S^{*} S^{+} S^{0} V_{mp} | electron overall energy conversion efficiency light quantum current at the maximum power point short-circuit current power of the incident light power at the maximum power point sensitizer excited energy state of the sensitizer oxidized state of the sensitizer ground energy state of the sensitizer voltage at the maximum power point |