The combination of a single photocatalytic system and a blue light source can be exploited for a variety of chemical reactions by altering light intensity. Can we just change the light intensity to vary the properties of a photocatalyst?

Visible Light

Carbon dioxide (CO₂)

Water (H₂O)

Oxygen (O₂)

Storage of solar energy

A blue diode (447 nm) as the light source and an inexpensive lens was used to regulate the light intensity. Same substrates on irradiation with blue light through lens and without lens give entirely different products under identical conditions.

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