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List of symbols and abbreviations

SC	Semiconductor
BG	Band gap
BOD	Biological/Biochemical Oxygen Demand
DW	Distilled water
NPs	Nanoparticles
UV	Ultra violet
UV-vis	Ultra violet and visible
MB	Methylene Blue
MO	Methyl Orange
TTIP	Titanium tetraisopropoxide
GA	Glutaraldehyde
DTGS	Deuterated Tri Glycine Sulfate
AgNO ₃	Silver nitrate
TiO ₂	Titanium dioxide
HCL	Hydrochloric acid
KBr	Potassium bromide
H ₂ O ₂	Hydrogen peroxide
NH ₃	Ammonia
As	Arsenic
JCPDS	Joint committee on powder diffraction standards
FTIR	Fourier-transform infrared spectroscopy
BET	Brunauer-Emmett-Teller
BJH	Berrett-Joyner-Halenda
pH	Power of hydrogen
E	Photon energy
E _u	Urbach energy
D	Crystallite size
C	Concentration
c	Speed of light in vacuum

μM	Micro molar
eV	Electron volt
rpm	Rotation/revolution per minute
%D	Percentage of degradation
A_0	Initial absorbance
A_t	Absorbance at time t
λ	Wavelength
θ	Bragg's angle
k	Proportionality constant
h	Planck's constant
% _{Anatase}	Percentage of anatase phase
% _{Rutile}	Percentage of rutile phase
ν	frequency
e^-	electron
h^+	hole
τ	Phonon lifetime
F.W.H.M	Full width at half maximum
β	F.W.H.M value
α	Absorption coefficient
VB	Valence band
CB	Conduction band
BG	Band gap
E_g	BG energy value
E_g^{opt}	Optical BG energy
RC	Rate constant
K_r	RC value
SND	Silver (Ag) nanoparticles templated on diatom frustules