





# State of the art on the photocatalytic applications of graphene based nanostructures: From elimination of hazardous pollutants to disinfection and fuel generation

[G. Mamba](#)<sup>a</sup>   [G. Gangashe](#)<sup>a</sup>, [L. Moss](#)<sup>a</sup>, [S. Hariganesh](#)<sup>b</sup>, [S. Thakur](#)<sup>c,d</sup>, [S. Vadivel](#)<sup>b</sup>, [A.K. Mishra](#)<sup>a</sup>, [G.D. Vilakati](#)<sup>e</sup>, [V. Muthuraj](#)<sup>f</sup>, [T.T.I. Nkambule](#)<sup>a</sup>

- <sup>a</sup> Nanotechnology and Water Sustainability Research Unit, College of Science, Engineering and Technology, University Of South Africa, Florida 1709, Roodepoort, Johannesburg, South Africa
- <sup>b</sup> Department of Chemistry, PSG College of Technology, Peelamedu, Coimbatore, 641004 Tamil Nadu, India
- <sup>c</sup> Institute of Materials Science of Kaunas University of Technology, Kaunas, Lithuania
- <sup>d</sup> School of Chemistry, Shoolini University, Solan, Himachal Pradesh, India
- <sup>e</sup> Department of Chemistry, University of Swaziland, Private Bag 4, Kwaluseni, M201, Swaziland
- <sup>f</sup> Department of Chemistry, VHNSN College, Virudhunagar, 626001, Tamil Nadu, India