

Supporting Information

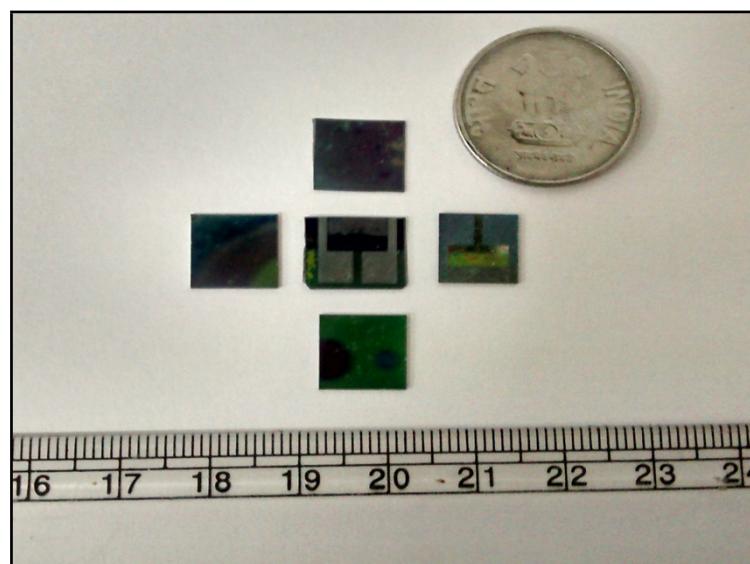


Figure S1: Optical images of as-grown GaN nanowires on Si(111) substrates by various approaches.

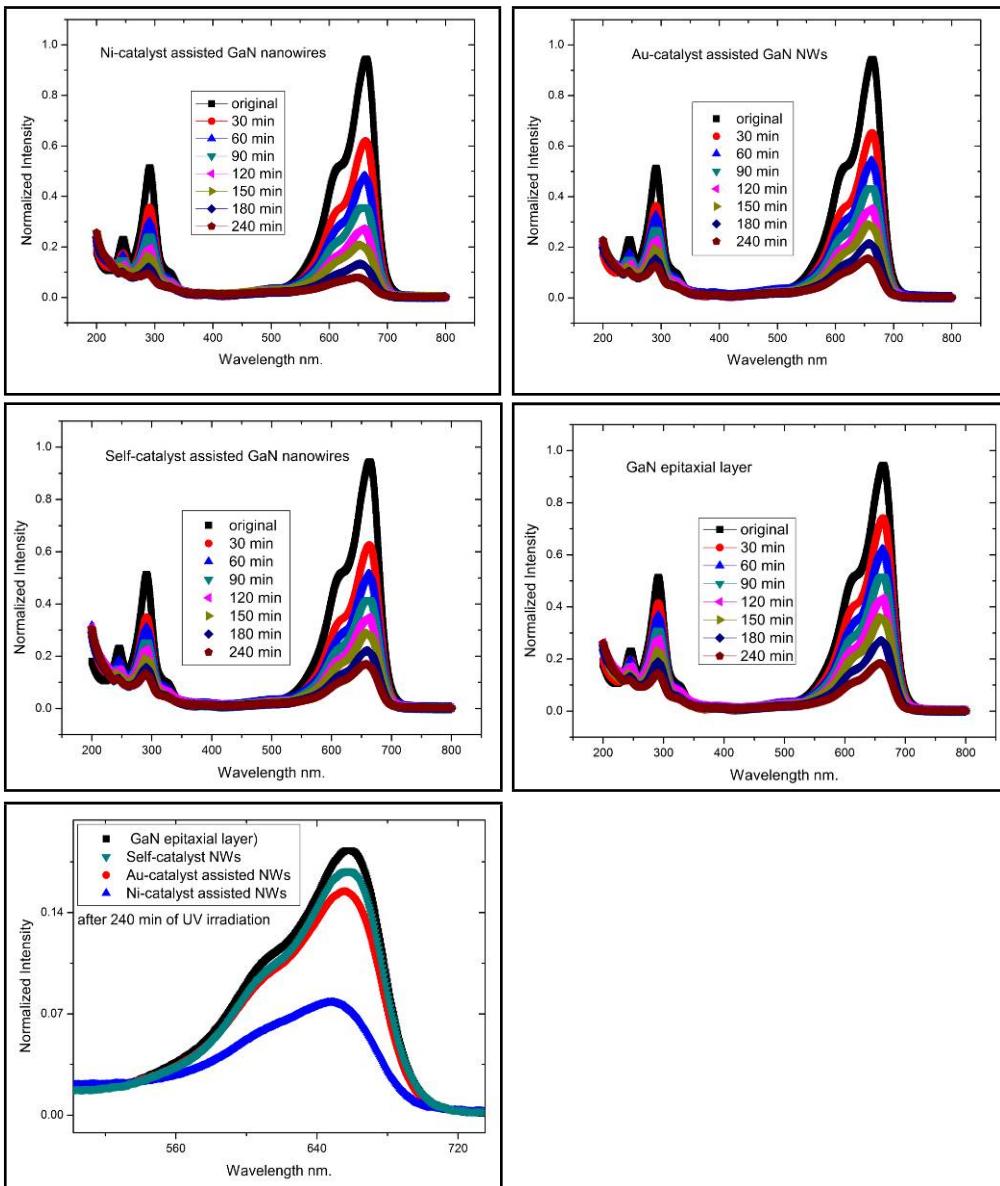


Figure S2 (a-d) shows the UV spectroscopy recorded during the photocatalytic dye degradation of Methylene Blue under UV irradiation using (a) Ni-catalyst assisted GaN nanowires (b) Au-catalyst assisted GaN nanowires (c) Self-catalyst assisted GaN nanowires (d) GaN epitaxial layer by MOCVD (e) comparison of various GaN nanowires after 240 minutes of UV irradiation.

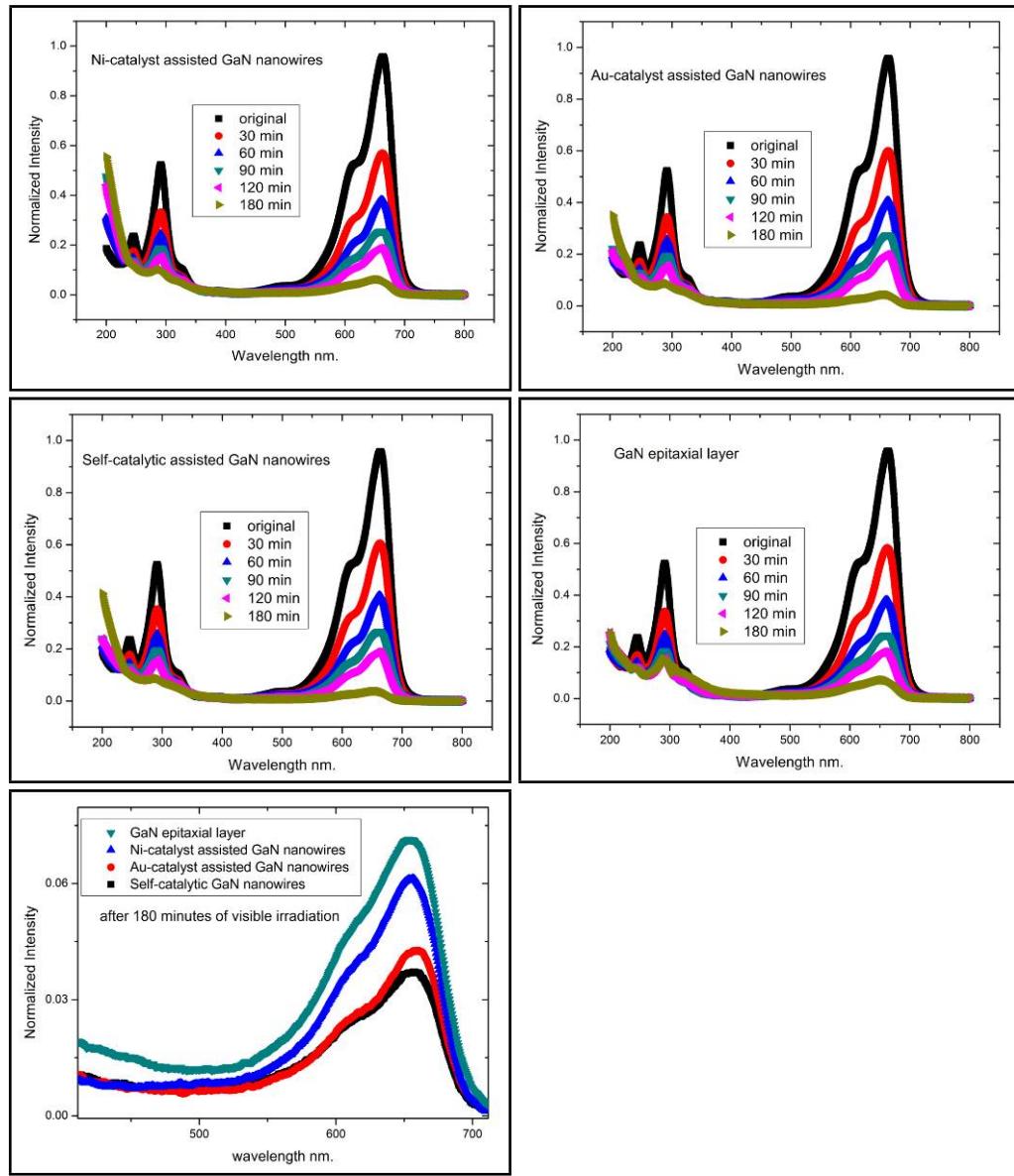


Figure S3 (a-d) shows the UV spectroscopy recorded during the photocatalytic dye degradation of Methylene Blue under Visible irradiation using (a) Ni-catalyst assisted GaN nanowires (b) Au-catalyst assisted GaN nanowires (c) Self-catalyst assisted GaN nanowires (d) GaN epitaxial layer by MOCVD (e) comparison of various GaN nanowires after 180 minutes of Visible light irradiation.