UV-assisted synthesis of indium nitride nano and microstructures

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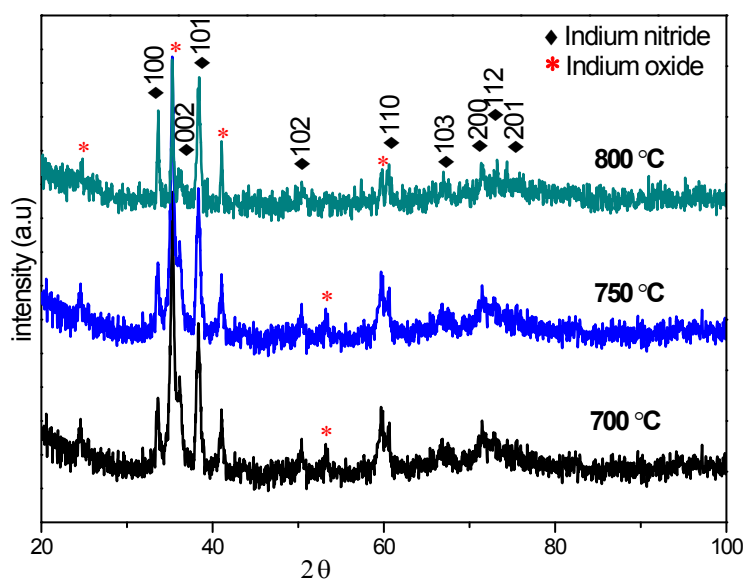
Supplementary Data

Fig.S1. XRD patterns of the as-synthesised materials after preparation at different temperatures after 6 h of photo decomposing ammonia. Peaks marked by ♦ are the hexagonal InN peak reflections, while In_2O_3 reflections are marked by an asterisk.
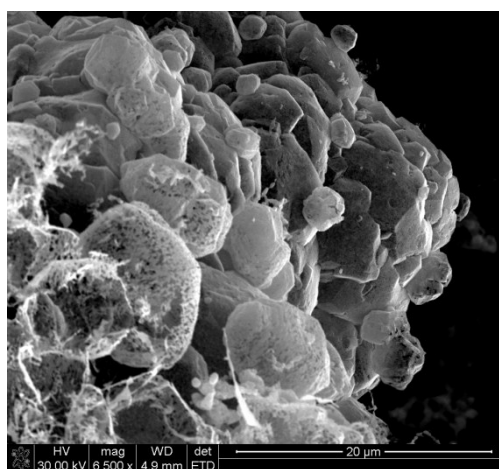

Fig.S2. The SEM image of a cluster of porous particles with hollow cores from photolysis of In_2O_3 and NH_3 at 700 °C.

Table S1 Synthesis parameters used to make InN

Experiment	UV-irradiation	Time (h)	Temperature (°C)	Product (TEM/SEM)	XRD
1	NH_3 only	6	700	Irregular perforated pieces	InN < In_2O_3
1	NH_3 only	6	750	Rod-like cone stacks	InN < In_2O_3
1	NH_3 only	6	800	Rod-like disc stacks	InN < In_2O_3
2	In_2O_3 and NH_3	2	700	Porous particles	InN < In_2O_3
2	In_2O_3 and NH_3	2	750	2D microsheets and amorphous nanowires	InN > In_2O_3
2	In_2O_3 and NH_3	2	800	InN nanotubes and In_2O_3 particles	InN > In_2O_3
3	In_2O_3 and NH_3	0.5	750	2D microsheets with embedded rhombohedral particles	InN < In_2O_3
3	In_2O_3 and NH_3	1	750	2D microsheets with rhombohedral holes	InN >In_2O_3
3	In_2O_3 and NH_3	3	750	InN nanowires	InN
3	In_2O_3 and NH_3	4	750	InN nanowires	InN
4	In_2O_3 and NH_3	0.5	800	In-filled InN tubes and In_2O_3 particles	InN < In_2O_3
4	In_2O_3 and NH_3	1	800	In-filled InN tubes and In_2O_3 particles	InN > In_2O_3
4	In_2O_3 and NH_3	3	800	In-filled InN tubes	InN
4	In_2O_3 and NH_3	4	800	In-filled InN tubes	InN