Supporting Information

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In-situ growth of CdTe nanostructures from novel electrodeposition bath: Tuning of electrical properties and Reuse of Ionic liquid

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SI-Figure-1a: EDX spectrum for the overall nanostructured CdTe thin film.

SI-Figure-1b: EDX spectrum for the nanostructures.

SI-Figure-2: TauC plot for the determination of the CdTe thin film.

SI-Figure-3a &b: Length and diameter of the structures measured by SEM length tool: the variation id shown for a typical bath of 1:10 Te:Cd in IL.

SI-Figure-4: Photographs of the ionic liquids after Re-Use.

SI-Figure-5: TEM images of the ionic liquid (a drop of ionic liquid dispersed in the solution of methanol).
SI-Figure-1a: EDX spectrum for the nanostructured CdTe thin film.
SI-Figure-1b: EDX spectrum for the nanostructures.
SI-Figure-2: TauC plot for the determination of the CdTe thin film.
SI-Figure-3a: Length of the structures measured by SEM length tool, during a typical deposition (1:10 Te: Cd) the average length was found to be 1.2 µm.

SI-Figure-3b: Diameter of the structures measured by SEM length tool, during a typical deposition (1:10 Te: Cd) the average diameter was found to be 75 nm.
SI-Figure-4: Photographs of the ionic liquids after Re-Use (a) after 1\textsuperscript{st} (b) 2\textsuperscript{nd} (c) 3\textsuperscript{rd} (d) 4\textsuperscript{th} run.

SI-Figure-5: TEM images of the ionic liquid (a) after 1\textsuperscript{st} run (b) 2\textsuperscript{nd} run (c) 3\textsuperscript{rd} run (a drop of used ionic liquid dispersed in the solution of methanol), the scale bar shows 20 nm length.