positioned at the nanowire/graphitic layer contact points, it would not affect the overall optical transparency of the top-contacted graphitic layers. The superior properties of the graphitic layers as a top contact material can be fully utilized in resulting opto-electronic devices.

Summary of Invention

~~Thus, viewed from one~~According to a first aspect, the invention provides a composition of matter comprising a plurality of nanowires on a substrate, said nanowires having been grown epitaxially on said substrate in the presence of a metal catalyst, preferably in a vapour-liquid-solid method, such that a catalyst deposit is located at the top of at least some of said nanowires,

wherein said nanowires comprise at least one group III-V compound or at least one group II-VI compound or comprises at least one non carbon group IV element; and

wherein a graphitic layer is in contact with at least some of the catalyst deposits on top of said nanowires.

~~Viewed from another~~According to a second aspect, the invention provides a process for the preparation of a composition of matter comprising:

(I) providing group II-VI elements or group III-V elements or at least one non carbon group IV element to the surface of a substrate, preferably via a molecular beam;

(II) epitaxially growing a plurality of nanowires from the surface of the substrate in the presence of a metal catalyst such that a catalyst deposit remains on the top of at least some of said nanowires;

(III) contacting said metal catalyst deposits with a graphitic layer a graphitic layer is in contact with at least some of the catalyst deposits on top of said nanowires.

Optionally, the surface of the substrate can be chemically/ physically modified to enhance the epitaxial growth of nanowires.

~~Viewed from another~~According to a third aspect, the invention provides a device~~, such as an electronic device,~~ comprising a composition as ~~hereinbefore~~ defined in the first aspect, e.g. an optical or electronic device, e.g. a solar cell.