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Title: **WO03038914A3: NEAR INFRA-RED COMPOSITE POLYMER-NANO MATERIALS AND ELECTRO-OPTICAL DEVICES PRODUCED THEI**  
[\[French\]](#)

Derwent Title: Composite material useful in manufacturing electro-optical devices, e.g. light emitting diodes, contains host material incorporating semiconductor nanocrystals that emit/absorb energy in near infrared spectral range  
[\[Derwent Record\]](#)

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Kind: **A3** Subsequent Publ. of the Int. search report <sup>i</sup> (See also: [WO03038914A2](#))

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Abstract: The invention comprises a composite material comprising a host material in which are incorporated semiconductor nanocrystals. The host material is light-transmissive and/or light-emissive and is electrical charge-transporting thus permitting electrical charge transport to the core of the nanocrystals. The semiconductor nanocrystals emit and/or absorb light in the near infrared spectral range. The nanocrystals cause the composite material to emit/absorb energy in the near infrared (NIR) spectral range, and/or to have a modified dielectric constant, compared to the host material. The invention further comprises electro-optical devices composed of this composite material and a method of producing them. Specifically described are light emitting diodes that emit light in the NIR and photodetectors that absorb light in the same region.  
[\[French\]](#)

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? Description [Expand description](#) [From equivalent [WO03038914A2](#)] **+ NEAR INFRA-RED COMPOSITE POLYMER-NANOCRYSTAL MATERIALS AND ELECTRO-OPTICAL DEVICES PRODUCED THEREFROM + FIELD OF THE INVENTION**

The present invention relates to the fields of molecular electronics and optoelectronics. More specifically, the invention relates to composite materials consisting of a suitable host material into which are incorporated, by blending, mixing, or any other suitable means semiconductor nanocrystals such that the composite material has a dielectric constant different than that of the host material and/or emits/absorbs energy in the near infrared (NIR) spectral range and to electro-optical devices composed of this composite material.

- + BACKGROUND OF THE INVENTION**
- + SUMMARY OF THE INVENTION**
- + BRIEF DESCRIPTION OF THE DRAWINGS**
- + DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS**

? Other Abstract Info: None



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