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(71) Applicant(s):

THE UNIVERSITY OF MANCHESTER [GB/GB]; Oxford Road Manchester M13 9PL (GB) (*for all designated states*)

(72) Inventor(s):

TURNER, Michael L.; School of Chemistry, The University of Manchester, Oxford Road, Manchester M13 9PL (GB)

FARAJI, Sheida; School of Chemistry, The University of Manchester, Oxford Road, Manchester M13 9PL (GB)

MAJEWSKI, Leszek; School of Electrical and Electronic Engineering, The University of Manchester, Oxford Road, Manchester M13 9PL (GB)

(74) Agent(s):

HINKS, Nathan Joel; HGF Limited 4th Floor, Merchant Exchange, 17-19 Whitworth Street West, Manchester M1 5WG (GB)

(54) Title (EN): DIELECTRIC MATERIALS FOR LOW VOLTAGE OFET OPERATION

(54) Title (FR): MATÉRIAUX DIÉLECTRIQUES POUR FONCTIONNEMENT DE TRANSISTOR ORGANIQUE À EFFET DE CHAMP À BASSE TENSION

(57) Abstract:

(EN): Organic thin film transistors are disclosed, as well as processes for their manufacture and their use in electronic devices. The organic thin film transistors comprise a bilayer gate dielectric formed from a nanocomposite layer and an intermediate capping layer. The organic thin film transistors operate at very low voltages, allowing their incorporation into portable and wearable devices, as well as apparatuses used in water-sensing applications.

(FR): L'invention concerne des transistors à couches minces organiques, ainsi que des procédés pour leur fabrication et leur utilisation dans des dispositifs électroniques. Les transistors à couches minces organiques comprennent un diélectrique de grille bicouche constitué d'une couche nanocomposite et d'une couche de recouvrement intermédiaire. Les transistors à couches minces organiques fonctionnent à des tensions très faibles, ce qui permet leur incorporation dans des dispositifs portables et vestimentaires, ainsi que des appareils utilisés dans des applications de détection d'eau.

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