Title (en)

GRAPHENE FET DEVICES, SYSTEMS, AND METHODS OF USING THE SAME FOR SEQUENCING NUCLEIC ACIDS

Title (de)

GRAPHEN-FET-VORRICHTUNGEN, SYSTEME UND VERFAHREN ZUR VERWENDUNG DAVON ZUR SEQUENZIERUNG VON NUKLEINSÄUREN

Title (fr)

DISPOSITIFS FET À BASE DE GRAPHÈNE, SYSTÈMES, ET LEURS PROCÉDÉS D'UTILISATION POUR LE SÉQUENÇAGE D'ACIDES NUCLÉIQUES

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Application

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Abstract (en)

[origin: WO2016145110A1] Provided herein are devices, systems, and methods of employing the same for the performance of bioinformatics analysis. The apparatuses and methods of the disclosure are directed in part to large scale graphene FET sensors, arrays, and integrated circuits employing the same for analyte measurements. The present GFET sensors, arrays, and integrated circuits may be fabricated using conventional CMOS processing techniques based on improved GFET pixel and array designs that increase measurement sensitivity and accuracy, and at the same time facilitate significantly small pixel sizes and dense GFET sensor based arrays. Improved fabrication techniques employing graphene as a reaction layer provide for rapid data acquisition from small sensors to large and dense arrays of sensors. Such arrays may be employed to detect a presence and/or concentration changes of various analyte types in a wide variety of chemical and/or biological processes, including DNA hybridization and/or sequencing reactions.

IPC 8 full level

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CPC (source: EP)

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