

# Partie 5 : Démanteler les tromperies du COVID-19 : Pourquoi les points quantiques sont-ils dans les injections du COVID-19 ?

Pourquoi un ingénieur de l'armée américaine d'origine chinoise a-t-il perfectionné une nanotechnologie pour fournir des points quantiques aux humains ? Une technologie de nanoarme qui appartient à l'armée chinoise et qui est utilisée dans les vaccins COVID-19.



[Karen Kingston](#)

Oct 18

143

19

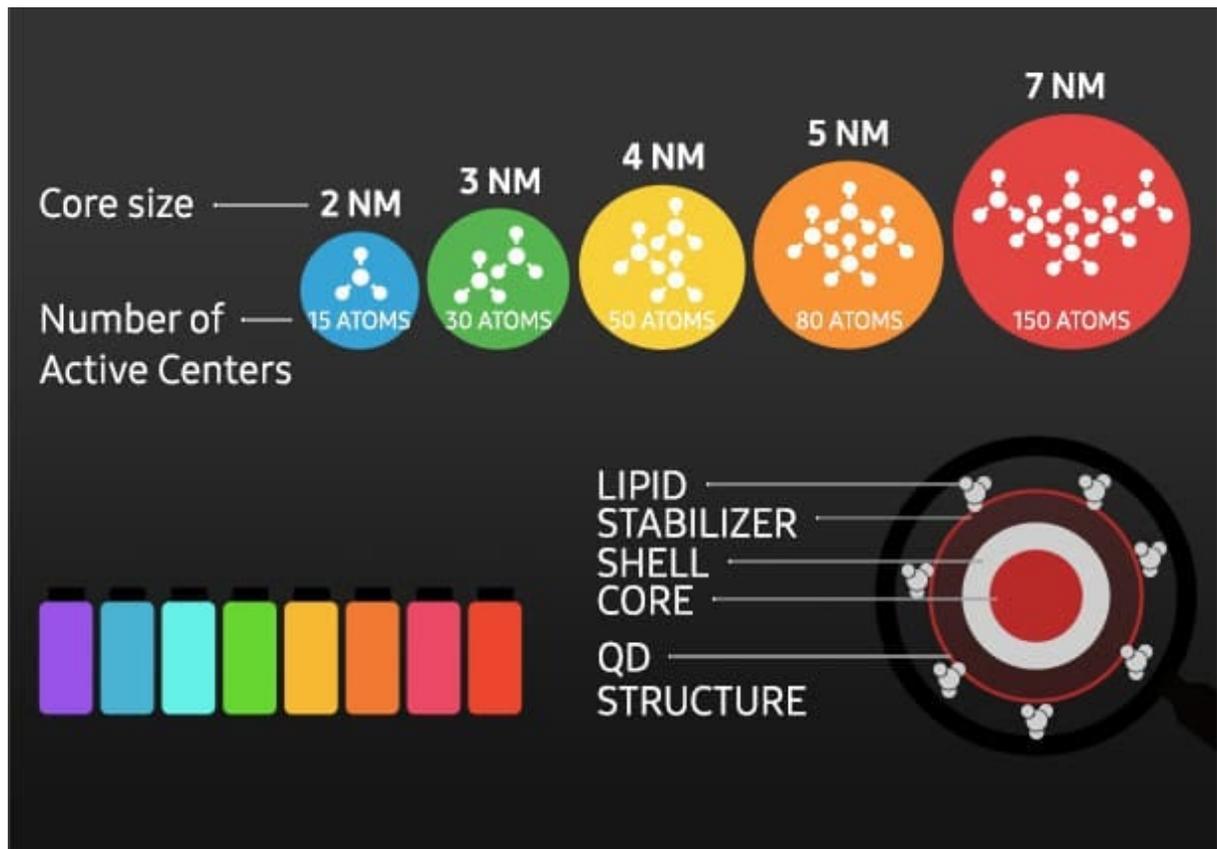
Les points quantiques et autres nanotechnologies sont des termes étrangers à la plupart d'entre nous. Ce sont des concepts étrangers difficiles à comprendre pour beaucoup de gens qui existent même. Bien qu'elles ne soient pas bien connues, les nanotechnologies telles que les points quantiques, les hydrogels, l'oxyde de graphène et les nanotubes de carbone à paroi unique (SWCNT) ont été utilisées dans les appareils électroniques grand public, les produits de santé, les aliments et les boissons, les neuro-armes militaires et la recherche et

les applications sur les dispositifs médicaux. depuis plus d'une décennie.

Si les points quantiques semblent être littéralement partout (omniprésents), pourquoi la plupart des Américains ignorent-ils ce que sont les points quantiques ?

Une raison peut être parce qu'ils sont invisibles. Les points quantiques ont une taille inférieure à 1/100ème de la taille d'un micron. (La plupart des virus mesurent plusieurs microns).

Alors que les points quantiques ne peuvent pas être vus par l'œil humain, les effets des points quantiques ne sont pas « invisibles » pour notre corps.



Les champs électromagnétiques et les fréquences émises par les points quantiques peuvent provoquer des maladies et des dysfonctionnements émotionnels, psychologiques et physiques dans notre corps. Les points quantiques peuvent être utilisés comme des neuro-armes et peuvent perturber gravement vos émotions, votre énergie, vos capacités physiques et votre capacité à penser correctement (brouillard cérébral).

Il est évident que les injections de COVID-19 contiennent des nanotechnologies qui peuvent héberger des champs électromagnétiques et recevoir des signaux. Les gens [sont](#)

magnétiques et souffrent d'apparition rapide de troubles neurologiques et d'hallucinations, entraînant parfois la mort.

Des scientifiques et des chercheurs ont observé la nanotechnologie d'auto-assemblage en examinant les ingrédients des flacons de COVID-19 au microscope électronique.

Selon le brevet US 10703789 B2 de MODERNA, qui peut être consulté sur le site Web de MODERNA, la technologie de tous les vaccins à ARNm COVID-19 utilise la technologie des nanoparticules lipidiques (LNP).

July 7, 2020 – Moderna's Patent for Current Vaccine Modified Polynucleotide or Production of Secreted Proteins  
<https://www.modernatx.com/sites/default/files/US10703789.pdf>

(57)

**ABSTRACT**

A pharmaceutical composition which has a plurality of lipid nanoparticles that has a mean particle size of between 80 nm and 160 nm and contains a modified mRNA encoding a polypeptide. The lipid nanoparticles include a cationic lipid, a neutral lipid, a cholesterol, and a PEG lipid. The mRNA contains a 5'-cap, 5'-UTR, N1-methyl-pseudouridine, a 3'-UTR, and a poly-A region with at least 100 nucleotides.

Analysis Karen Kingston© 2022

**miFIGHT.org** US10703789B2

(12) **United States Patent** (10) Patent No.: **US 10,703,789 B2**  
 De Fougereolles et al. (15) Date of Patent: **\*Jul. 7, 2020**

(54) **MODIFIED POLYNUCLEOTIDES FOR THE PRODUCTION OF SECRETED PROTEINS**

(71) Applicant: **ModernaTX, Inc.**, Cambridge, MA (US)

(72) Inventors: **Alexandre De Fougereolles**, Worcester (MA); **Justin Guzik**, Truro, MA (MA)

(73) Assignee: **ModernaTX, Inc.**, Cambridge, MA (MA)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16438379**

(22) Filed: **Jan. 31, 2019**

(65) **Prior Publication Data**  
 US 20200017565 A1 Jan. 16, 2020

**Related U.S. Application Data**

(63) Continuation of application No. 14-987,328, filed on Jan. 4, 2016, now Pat. No. 10,345,166, which is a (Continued)

(51) Int. Cl. (2006.01)  
 A61K 36/00 (2006.01)  
 A61K 38/27 (2006.01)  
 A61K 47/54 (2017.01)  
 A61K 9/127 (2006.01)  
 C12N 1/21 (2006.01)  
 C12N 25/08 (2006.01)  
 C12N 25/10 (2006.01)  
 C12N 25/12 (2006.01)  
 C12N 25/14 (2006.01)  
 C12N 25/16 (2006.01)  
 C12N 25/18 (2006.01)  
 C12N 25/20 (2006.01)  
 C12N 25/22 (2006.01)  
 C12N 25/24 (2006.01)  
 C12N 25/26 (2006.01)  
 C12N 25/28 (2006.01)  
 C12N 25/30 (2006.01)  
 C12N 25/32 (2006.01)  
 C12N 25/34 (2006.01)  
 C12N 25/36 (2006.01)  
 C12N 25/38 (2006.01)  
 C12N 25/40 (2006.01)  
 C12N 25/42 (2006.01)  
 C12N 25/44 (2006.01)  
 C12N 25/46 (2006.01)  
 C12N 25/48 (2006.01)  
 C12N 25/50 (2006.01)  
 C12N 25/52 (2006.01)  
 C12N 25/54 (2006.01)  
 C12N 25/56 (2006.01)  
 C12N 25/58 (2006.01)  
 C12N 25/60 (2006.01)  
 C12N 25/62 (2006.01)  
 C12N 25/64 (2006.01)  
 C12N 25/66 (2006.01)  
 C12N 25/68 (2006.01)  
 C12N 25/70 (2006.01)  
 C12N 25/72 (2006.01)  
 C12N 25/74 (2006.01)  
 C12N 25/76 (2006.01)  
 C12N 25/78 (2006.01)  
 C12N 25/80 (2006.01)  
 C12N 25/82 (2006.01)  
 C12N 25/84 (2006.01)  
 C12N 25/86 (2006.01)  
 C12N 25/88 (2006.01)  
 C12N 25/90 (2006.01)  
 C12N 25/92 (2006.01)  
 C12N 25/94 (2006.01)  
 C12N 25/96 (2006.01)  
 C12N 25/98 (2006.01)  
 C12N 26/00 (2006.01)  
 C12N 26/02 (2006.01)  
 C12N 26/04 (2006.01)  
 C12N 26/06 (2006.01)  
 C12N 26/08 (2006.01)  
 C12N 26/10 (2006.01)  
 C12N 26/12 (2006.01)  
 C12N 26/14 (2006.01)  
 C12N 26/16 (2006.01)  
 C12N 26/18 (2006.01)  
 C12N 26/20 (2006.01)  
 C12N 26/22 (2006.01)  
 C12N 26/24 (2006.01)  
 C12N 26/26 (2006.01)  
 C12N 26/28 (2006.01)  
 C12N 26/30 (2006.01)  
 C12N 26/32 (2006.01)  
 C12N 26/34 (2006.01)  
 C12N 26/36 (2006.01)  
 C12N 26/38 (2006.01)  
 C12N 26/40 (2006.01)  
 C12N 26/42 (2006.01)  
 C12N 26/44 (2006.01)  
 C12N 26/46 (2006.01)  
 C12N 26/48 (2006.01)  
 C12N 26/50 (2006.01)  
 C12N 26/52 (2006.01)  
 C12N 26/54 (2006.01)  
 C12N 26/56 (2006.01)  
 C12N 26/58 (2006.01)  
 C12N 26/60 (2006.01)  
 C12N 26/62 (2006.01)  
 C12N 26/64 (2006.01)  
 C12N 26/66 (2006.01)  
 C12N 26/68 (2006.01)  
 C12N 26/70 (2006.01)  
 C12N 26/72 (2006.01)  
 C12N 26/74 (2006.01)  
 C12N 26/76 (2006.01)  
 C12N 26/78 (2006.01)  
 C12N 26/80 (2006.01)  
 C12N 26/82 (2006.01)  
 C12N 26/84 (2006.01)  
 C12N 26/86 (2006.01)  
 C12N 26/88 (2006.01)  
 C12N 26/90 (2006.01)  
 C12N 26/92 (2006.01)  
 C12N 26/94 (2006.01)  
 C12N 26/96 (2006.01)  
 C12N 26/98 (2006.01)  
 C12N 27/00 (2006.01)  
 C12N 27/02 (2006.01)  
 C12N 27/04 (2006.01)  
 C12N 27/06 (2006.01)  
 C12N 27/08 (2006.01)  
 C12N 27/10 (2006.01)  
 C12N 27/12 (2006.01)  
 C12N 27/14 (2006.01)  
 C12N 27/16 (2006.01)  
 C12N 27/18 (2006.01)  
 C12N 27/20 (2006.01)  
 C12N 27/22 (2006.01)  
 C12N 27/24 (2006.01)  
 C12N 27/26 (2006.01)  
 C12N 27/28 (2006.01)  
 C12N 27/30 (2006.01)  
 C12N 27/32 (2006.01)  
 C12N 27/34 (2006.01)  
 C12N 27/36 (2006.01)  
 C12N 27/38 (2006.01)  
 C12N 27/40 (2006.01)  
 C12N 27/42 (2006.01)  
 C12N 27/44 (2006.01)  
 C12N 27/46 (2006.01)  
 C12N 27/48 (2006.01)  
 C12N 27/50 (2006.01)  
 C12N 27/52 (2006.01)  
 C12N 27/54 (2006.01)  
 C12N 27/56 (2006.01)  
 C12N 27/58 (2006.01)  
 C12N 27/60 (2006.01)  
 C12N 27/62 (2006.01)  
 C12N 27/64 (2006.01)  
 C12N 27/66 (2006.01)  
 C12N 27/68 (2006.01)  
 C12N 27/70 (2006.01)  
 C12N 27/72 (2006.01)  
 C12N 27/74 (2006.01)  
 C12N 27/76 (2006.01)  
 C12N 27/78 (2006.01)  
 C12N 27/80 (2006.01)  
 C12N 27/82 (2006.01)  
 C12N 27/84 (2006.01)  
 C12N 27/86 (2006.01)  
 C12N 27/88 (2006.01)  
 C12N 27/90 (2006.01)  
 C12N 27/92 (2006.01)  
 C12N 27/94 (2006.01)  
 C12N 27/96 (2006.01)  
 C12N 27/98 (2006.01)  
 C12N 28/00 (2006.01)  
 C12N 28/02 (2006.01)  
 C12N 28/04 (2006.01)  
 C12N 28/06 (2006.01)  
 C12N 28/08 (2006.01)  
 C12N 28/10 (2006.01)  
 C12N 28/12 (2006.01)  
 C12N 28/14 (2006.01)  
 C12N 28/16 (2006.01)  
 C12N 28/18 (2006.01)  
 C12N 28/20 (2006.01)  
 C12N 28/22 (2006.01)  
 C12N 28/24 (2006.01)  
 C12N 28/26 (2006.01)  
 C12N 28/28 (2006.01)  
 C12N 28/30 (2006.01)  
 C12N 28/32 (2006.01)  
 C12N 28/34 (2006.01)  
 C12N 28/36 (2006.01)  
 C12N 28/38 (2006.01)  
 C12N 28/40 (2006.01)  
 C12N 28/42 (2006.01)  
 C12N 28/44 (2006.01)  
 C12N 28/46 (2006.01)  
 C12N 28/48 (2006.01)  
 C12N 28/50 (2006.01)  
 C12N 28/52 (2006.01)  
 C12N 28/54 (2006.01)  
 C12N 28/56 (2006.01)  
 C12N 28/58 (2006.01)  
 C12N 28/60 (2006.01)  
 C12N 28/62 (2006.01)  
 C12N 28/64 (2006.01)  
 C12N 28/66 (2006.01)  
 C12N 28/68 (2006.01)  
 C12N 28/70 (2006.01)  
 C12N 28/72 (2006.01)  
 C12N 28/74 (2006.01)  
 C12N 28/76 (2006.01)  
 C12N 28/78 (2006.01)  
 C12N 28/80 (2006.01)  
 C12N 28/82 (2006.01)  
 C12N 28/84 (2006.01)  
 C12N 28/86 (2006.01)  
 C12N 28/88 (2006.01)  
 C12N 28/90 (2006.01)  
 C12N 28/92 (2006.01)  
 C12N 28/94 (2006.01)  
 C12N 28/96 (2006.01)  
 C12N 28/98 (2006.01)  
 C12N 29/00 (2006.01)  
 C12N 29/02 (2006.01)  
 C12N 29/04 (2006.01)  
 C12N 29/06 (2006.01)  
 C12N 29/08 (2006.01)  
 C12N 29/10 (2006.01)  
 C12N 29/12 (2006.01)  
 C12N 29/14 (2006.01)  
 C12N 29/16 (2006.01)  
 C12N 29/18 (2006.01)  
 C12N 29/20 (2006.01)  
 C12N 29/22 (2006.01)  
 C12N 29/24 (2006.01)  
 C12N 29/26 (2006.01)  
 C12N 29/28 (2006.01)  
 C12N 29/30 (2006.01)  
 C12N 29/32 (2006.01)  
 C12N 29/34 (2006.01)  
 C12N 29/36 (2006.01)  
 C12N 29/38 (2006.01)  
 C12N 29/40 (2006.01)  
 C12N 29/42 (2006.01)  
 C12N 29/44 (2006.01)  
 C12N 29/46 (2006.01)  
 C12N 29/48 (2006.01)  
 C12N 29/50 (2006.01)  
 C12N 29/52 (2006.01)  
 C12N 29/54 (2006.01)  
 C12N 29/56 (2006.01)  
 C12N 29/58 (2006.01)  
 C12N 29/60 (2006.01)  
 C12N 29/62 (2006.01)  
 C12N 29/64 (2006.01)  
 C12N 29/66 (2006.01)  
 C12N 29/68 (2006.01)  
 C12N 29/70 (2006.01)  
 C12N 29/72 (2006.01)  
 C12N 29/74 (2006.01)  
 C12N 29/76 (2006.01)  
 C12N 29/78 (2006.01)  
 C12N 29/80 (2006.01)  
 C12N 29/82 (2006.01)  
 C12N 29/84 (2006.01)  
 C12N 29/86 (2006.01)  
 C12N 29/88 (2006.01)  
 C12N 29/90 (2006.01)  
 C12N 29/92 (2006.01)  
 C12N 29/94 (2006.01)  
 C12N 29/96 (2006.01)  
 C12N 29/98 (2006.01)  
 C12N 30/00 (2006.01)  
 C12N 30/02 (2006.01)  
 C12N 30/04 (2006.01)  
 C12N 30/06 (2006.01)  
 C12N 30/08 (2006.01)  
 C12N 30/10 (2006.01)  
 C12N 30/12 (2006.01)  
 C12N 30/14 (2006.01)  
 C12N 30/16 (2006.01)  
 C12N 30/18 (2006.01)  
 C12N 30/20 (2006.01)  
 C12N 30/22 (2006.01)  
 C12N 30/24 (2006.01)  
 C12N 30/26 (2006.01)  
 C12N 30/28 (2006.01)  
 C12N 30/30 (2006.01)  
 C12N 30/32 (2006.01)  
 C12N 30/34 (2006.01)  
 C12N 30/36 (2006.01)  
 C12N 30/38 (2006.01)  
 C12N 30/40 (2006.01)  
 C12N 30/42 (2006.01)  
 C12N 30/44 (2006.01)  
 C12N 30/46 (2006.01)  
 C12N 30/48 (2006.01)  
 C12N 30/50 (2006.01)  
 C12N 30/52 (2006.01)  
 C12N 30/54 (2006.01)  
 C12N 30/56 (2006.01)  
 C12N 30/58 (2006.01)  
 C12N 30/60 (2006.01)  
 C12N 30/62 (2006.01)  
 C12N 30/64 (2006.01)  
 C12N 30/66 (2006.01)  
 C12N 30/68 (2006.01)  
 C12N 30/70 (2006.01)  
 C12N 30/72 (2006.01)  
 C12N 30/74 (2006.01)  
 C12N 30/76 (2006.01)  
 C12N 30/78 (2006.01)  
 C12N 30/80 (2006.01)  
 C12N 30/82 (2006.01)  
 C12N 30/84 (2006.01)  
 C12N 30/86 (2006.01)  
 C12N 30/88 (2006.01)  
 C12N 30/90 (2006.01)  
 C12N 30/92 (2006.01)  
 C12N 30/94 (2006.01)  
 C12N 30/96 (2006.01)  
 C12N 30/98 (2006.01)  
 C12N 31/00 (2006.01)  
 C12N 31/02 (2006.01)  
 C12N 31/04 (2006.01)  
 C12N 31/06 (2006.01)  
 C12N 31/08 (2006.01)  
 C12N 31/10 (2006.01)  
 C12N 31/12 (2006.01)  
 C12N 31/14 (2006.01)  
 C12N 31/16 (2006.01)  
 C12N 31/18 (2006.01)  
 C12N 31/20 (2006.01)  
 C12N 31/22 (2006.01)  
 C12N 31/24 (2006.01)  
 C12N 31/26 (2006.01)  
 C12N 31/28 (2006.01)  
 C12N 31/30 (2006.01)  
 C12N 31/32 (2006.01)  
 C12N 31/34 (2006.01)  
 C12N 31/36 (2006.01)  
 C12N 31/38 (2006.01)  
 C12N 31/40 (2006.01)  
 C12N 31/42 (2006.01)  
 C12N 31/44 (2006.01)  
 C12N 31/46 (2006.01)  
 C12N 31/48 (2006.01)  
 C12N 31/50 (2006.01)  
 C12N 31/52 (2006.01)  
 C12N 31/54 (2006.01)  
 C12N 31/56 (2006.01)  
 C12N 31/58 (2006.01)  
 C12N 31/60 (2006.01)  
 C12N 31/62 (2006.01)  
 C12N 31/64 (2006.01)  
 C12N 31/66 (2006.01)  
 C12N 31/68 (2006.01)  
 C12N 31/70 (2006.01)  
 C12N 31/72 (2006.01)  
 C12N 31/74 (2006.01)  
 C12N 31/76 (2006.01)  
 C12N 31/78 (2006.01)  
 C12N 31/80 (2006.01)  
 C12N 31/82 (2006.01)  
 C12N 31/84 (2006.01)  
 C12N 31/86 (2006.01)  
 C12N 31/88 (2006.01)  
 C12N 31/90 (2006.01)  
 C12N 31/92 (2006.01)  
 C12N 31/94 (2006.01)  
 C12N 31/96 (2006.01)  
 C12N 31/98 (2006.01)  
 C12N 32/00 (2006.01)  
 C12N 32/02 (2006.01)  
 C12N 32/04 (2006.01)  
 C12N 32/06 (2006.01)  
 C12N 32/08 (2006.01)  
 C12N 32/10 (2006.01)  
 C12N 32/12 (2006.01)  
 C12N 32/14 (2006.01)  
 C12N 32/16 (2006.01)  
 C12N 32/18 (2006.01)  
 C12N 32/20 (2006.01)  
 C12N 32/22 (2006.01)  
 C12N 32/24 (2006.01)  
 C12N 32/26 (2006.01)  
 C12N 32/28 (2006.01)  
 C12N 32/30 (2006.01)  
 C12N 32/32 (2006.01)  
 C12N 32/34 (2006.01)  
 C12N 32/36 (2006.01)  
 C12N 32/38 (2006.01)  
 C12N 32/40 (2006.01)  
 C12N 32/42 (2006.01)  
 C12N 32/44 (2006.01)  
 C12N 32/46 (2006.01)  
 C12N 32/48 (2006.01)  
 C12N 32/50 (2006.01)  
 C12N 32/52 (2006.01)  
 C12N 32/54 (2006.01)  
 C12N 32/56 (2006.01)  
 C12N 32/58 (2006.01)  
 C12N 32/60 (2006.01)  
 C12N 32/62 (2006.01)  
 C12N 32/64 (2006.01)  
 C12N 32/66 (2006.01)  
 C12N 32/68 (2006.01)  
 C12N 32/70 (2006.01)  
 C12N 32/72 (2006.01)  
 C12N 32/74 (2006.01)  
 C12N 32/76 (2006.01)  
 C12N 32/78 (2006.01)  
 C12N 32/80 (2006.01)  
 C12N 32/82 (2006.01)  
 C12N 32/84 (2006.01)  
 C12N 32/86 (2006.01)  
 C12N 32/88 (2006.01)  
 C12N 32/90 (2006.01)  
 C12N 32/92 (2006.01)  
 C12N 32/94 (2006.01)  
 C12N 32/96 (2006.01)  
 C12N 32/98 (2006.01)  
 C12N 33/00 (2006.01)  
 C12N 33/02 (2006.01)  
 C12N 33/04 (2006.01)  
 C12N 33/06 (2006.01)  
 C12N 33/08 (2006.01)  
 C12N 33/10 (2006.01)  
 C12N 33/12 (2006.01)  
 C12N 33/14 (2006.01)  
 C12N 33/16 (2006.01)  
 C12N 33/18 (2006.01)  
 C12N 33/20 (2006.01)  
 C12N 33/22 (2006.01)  
 C12N 33/24 (2006.01)  
 C12N 33/26 (2006.01)  
 C12N 33/28 (2006.01)  
 C12N 33/30 (2006.01)  
 C12N 33/32 (2006.01)  
 C12N 33/34 (2006.01)  
 C12N 33/36 (2006.01)  
 C12N 33/38 (2006.01)  
 C12N 33/40 (2006.01)  
 C12N 33/42 (2006.01)  
 C12N 33/44 (2006.01)  
 C12N 33/46 (2006.01)  
 C12N 33/48 (2006.01)  
 C12N 33/50 (2006.01)  
 C12N 33/52 (2006.01)  
 C12N 33/54 (2006.01)  
 C12N 33/56 (2006.01)  
 C12N 33/58 (2006.01)  
 C12N 33/60 (2006.01)  
 C12N 33/62 (2006.01)  
 C12N 33/64 (2006.01)  
 C12N 33/66 (2006.01)  
 C12N 33/68 (2006.01)  
 C12N 33/70 (2006.01)  
 C12N 33/72 (2006.01)  
 C12N 33/74 (2006.01)  
 C12N 33/76 (2006.01)  
 C12N 33/78 (2006.01)  
 C12N 33/80 (2006.01)  
 C12N 33/82 (2006.01)  
 C12N 33/84 (2006.01)  
 C12N 33/86 (2006.01)  
 C12N 33/88 (2006.01)  
 C12N 33/90 (2006.01)  
 C12N 33/92 (2006.01)  
 C12N 33/94 (2006.01)  
 C12N 33/96 (2006.01)  
 C12N 33/98 (2006.01)  
 C12N 34/00 (2006.01)  
 C12N 34/02 (2006.01)  
 C12N 34/04 (2006.01)  
 C12N 34/06 (2006.01)  
 C12N 34/08 (2006.01)  
 C12N 34/10 (2006.01)  
 C12N 34/12 (2006.01)  
 C12N 34/14 (2006.01)  
 C12N 34/16 (2006.01)  
 C12N 34/18 (2006.01)  
 C12N 34/20 (2006.01)  
 C12N 34/22 (2006.01)  
 C12N 34/24 (2006.01)  
 C12N 34/26 (2006.01)  
 C12N 34/28 (2006.01)  
 C12N 34/30 (2006.01)  
 C12N 34/32 (2006.01)  
 C12N 34/34 (2006.01)  
 C12N 34/36 (2006.01)  
 C12N 34/38 (2006.01)  
 C12N 34/40 (2006.01)  
 C12N 34/42 (2006.01)  
 C12N 34/44 (2006.01)  
 C12N 34/46 (2006.01)  
 C12N 34/48 (2006.01)  
 C12N 34/50 (2006.01)  
 C12N 34/52 (2006.01)  
 C12N 34/54 (2006.01)  
 C12N 34/56 (2006.01)  
 C12N 34/58 (2006.01)  
 C12N 34/60 (2006.01)  
 C12N 34/62 (2006.01)  
 C12N 34/64 (2006.01)  
 C12N 34/66 (2006.01)  
 C12N 34/68 (2006.01)  
 C12N 34/

US 10,703,789 B2

## 219

diameter particle that can remain stable at high temperatures (150° C.) (Grabow and Jaegar, Nature Materials 2012, 11:269-269; herein incorporated by reference in its entirety). Additionally these microsponges may be able to exhibit an extraordinary degree of protection from degradation by ribonucleases.

In another embodiment, the polymer-based self-assembled nanoparticles such as, but not limited to, microsponges, may be fully programmable nanoparticles. The geometry, size and stoichiometry of the nanoparticle may be precisely controlled to create the optimal nanoparticle for delivery of cargo such as, but not limited to, polynucleotides, primary constructs and/or mRNA.

<https://assets.modernatx.com/m/197fe68e2047ca6a/original/US10703789.pdf>



Les articles 219 et 220 stipulent que les LNP peuvent contenir des gels et des hydrogels.

## 219

### Gels and Hydrogels

In one embodiment, the polynucleotides, primary constructs and/or mRNA disclosed herein may be encapsulated into any hydrogel known in the art which may form a gel when injected into a subject. Hydrogels are a network of polymer chains that are hydrophilic, and are sometimes

## 220

found as a colloidal gel in which water is the dispersion medium. Hydrogels are highly absorbent (they can contain over 99% water) natural or synthetic polymers. Hydrogels also possess a degree of flexibility very similar to natural tissue, due to their significant water content. The hydrogel described herein may be used to encapsulate lipid nanoparticles which are biocompatible, biodegradable and/or porous.

<https://assets.modernatx.com/m/197fe68e2047ca6a/original/US10703789.pdf>

US 0028565 A1 fait partie de la propriété intellectuelle de [MODERNA US 10703789 B2](#) et concerne des nanoparticules métalliques semi-conductrices dispersibles dans l'eau.



US 20120228565A1

miFIGHT.org  
Analysis Karen Kingston © 2021

(19) **United States**

(12) **Patent Application Publication**  
**Adams et al.**

(10) **Pub. No.: US 2012/0228565 A1**  
(43) **Pub. Date: Sep. 13, 2012**

(54) **METHOD FOR PREPARING  
SURFACE-MODIFIED SEMICONDUCTIVE  
AND METALLIC NANOPARTICLES HAVING  
ENHANCED DISPERSIBILITY IN AQUEOUS  
MEDIA**

(75) Inventors: **Edward William Adams**, San Francisco, CA (US); **Marcel Pierre Bruchez, JR.**, Pittsburgh, PA (US)

(73) Assignee: **LIFE TECHNOLOGIES CORPORATION**, Carlsbad, CA (US)

(21) Appl. No.: **13/423,055**

(22) Filed: **Mar. 16, 2012**

**Related U.S. Application Data**

(60) Continuation of application No. 12/624,283, filed on Nov. 23, 2009, now Pat. No. 8,158,194, which is a continuation of application No. 12/013,371, filed on Jan. 11, 2008, now abandoned, which is a continuation of application No. 10/717,246, filed on Nov. 18, 2003, now abandoned, which is a division of application No. 09/841,237, filed on Apr. 23, 2001, now Pat. No. 6,649,138.

(60) Provisional application No. 60/240,216, filed on Oct. 13, 2000.

(57) **ABSTRACT**

Water-dispersible nanoparticles are prepared by applying a coating of a multiply amphipathic dispersant to the surface of a hydrophobic nanoparticle comprised of a semiconductive or metallic material. The multiply amphipathic dispersant has two or more hydrophobic regions and two or more hydrophilic regions, and is typically polymeric. Preferred polymeric dispersants are comprised of (1) a hydrophobic backbone with hydrophilic branches, (2) a hydrophilic backbone with hydrophobic branches, or (3) a backbone that may be either hydrophobic or hydrophilic, and substituted with both hydrophilic and hydrophobic branches. Monodisperse populations of water-dispersible nanoparticles are also provided, as are conjugates of the water-dispersible nanoparticles with affinity molecules such as peptides, oligonucleotides, and the like.

Analysis Karen Kingston © 2021

miFIGHT.org

Le brevet US 0028565 A1 a breveté la fonctionnalité de la nanotechnologie dans les injections d'armes biologiques COVID-19 pour assurer une biodistribution rapide, facile et ciblée des nanoparticules dans tout le corps.

Cette nanotechnologie de «vaccin» COVID-19 est un point quantique. J'ai fait un reportage sur US 0028565 A1 en [août 2021 dans l'émission de Pete Sentilli](#).

Depuis qu'il a rendu compte publiquement de ce brevet l'été dernier sur plusieurs salons, l'office américain des brevets a [bloqué l'accès public au brevet américain 0028565 A1](#).

13/423,055 | IVGN 762.6 CON:



**METALLIC NANOPARTICLES HAVING ENHANCED DISPERSIBILITY IN AQUEOUS MEDIA COMPRISING A POLYMER HAVING ALKYL ACRYLAMIDE SIDE CHAINS**

Public view

Maintenance Fee Storefront Global Dossier

Application #	Attorney Docket #	Patent #	Status	Filing or 371 (c) date
13/423,055	IVGN 762.6 CON	8,691,384 Issued - 04/08/2014	Patent Expired Due to NonPayment of Maintenance Fees Under 37 CFR 1.362 - 05/16/2022	03/16/2012

Application type	Utility	Earliest publication #	US 2012-0228565 A1	Intl. registration # (Hague)	-
Examiner	HOA T LE	Earliest publication date	09/13/2012	Intl. registration publication date	-
Group art unit	1788	Assignee for publication	LIFE TECHNOLOGIES CORPORATION Carlsbad		
Class/subclass	428/407.000	Confirmation #	4593		
AIA (first inventor to file)	No				
Entity status	Regular Undiscounted				

**Edward William Adams, San Francisco, CA (US); Marcel Pierre Bruchez, JR., Pittsburgh, PA (US)**

**Correspondence address**  
52069 - LIFE TECHNOLOGIES CORPORATION  
Attn: IP Department  
5823 Newton Drive  
Carlsbad, CA  
UNITED STATES

**Inventors**  
Edward William Adams  
San Francisco, CALIFORNIA (US)  
Marcel Pierre Bruchez  
Pittsburgh, PENNSYLVANIA (US)

**Applicants**  
Data not available

<https://patentcenter.uspto.gov/applications/13423055>

Le brevet a expiré le 16 mai 2022 en raison d'un non-paiement. Life Technologies est répertorié comme contact correspondant. L'adresse indiquée est celle de l'un des [ThermoFisher Scientific](#) à Carlsbad, en Californie. Les noms des candidats d'origine, Edward William Adams et Marcel Pierre Bruschez, Jr., sont répertoriés comme indisponibles.

### Partager le rapport de Kingston

Selon US 0028565 A1, la fonctionnalité des points quantiques est basée sur la mécanique quantique de la particule de Bohr. En raison de la mécanique quantique, des points quantiques qui ont été injectés aux citoyens américains et mondiaux au moyen des armes biologiques COVID-19 et peuvent littéralement apparaître dans le corps humain

en fonction de fréquences électromagnétiques (EMF) spécifiques ou disparaître en fonction de fréquences spécifiques.

**METHOD FOR PREPARING SURFACE-MODIFIED SEMICONDUCTIVE AND METALLIC NANOPARTICLES HAVING ENHANCED DISPERSIBILITY IN AQUEOUS MEDIA**

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a divisional of U.S. patent application Ser. No. 09/841,237, filed Apr. 23, 2001, which claims priority to U.S. Provisional Application No. 60/240,216, filed Oct. 13, 2000. The disclosures of the aforementioned applications are incorporated by reference in their entireties.

TECHNICAL FIELD

[0002] This invention relates generally to surface-modified nanoparticles, and more particularly relates to surface-modified semiconductor and metal nanoparticles having enhanced dispersibility in aqueous media as well as superior colloidal and photophysical stability. The invention additionally relates to methods for making and using the novel surface-modified nanoparticles. The invention finds utility in a variety of fields, including biology, analytical and combinatorial chemistry, medical diagnostics, and genetic analysis.

BACKGROUND

[0003] Semiconductor nanocrystals (also known as quantum dot particles) whose radii are smaller than the bulk excitation Bohr radius constitute a class of materials intermediate between molecular and bulk forms of matter. Quantum confinement of both the electron and hole in all three dimensions leads to an increase in the effective band gap of the material with decreasing crystallite size. Consequently, both the optical absorption and emission of semiconductor nanocrystals shift to the blue (higher energies) as the size of the nanocrystals gets smaller.

[0004] Semiconductor nanocrystals are nanoparticles composed of an inorganic, crystalline semiconductive material and have unique photophysical, photochemical and nonlinear optical properties arising from quantum size effects, and have therefore attracted a great deal of attention for their potential applicability in a variety of contexts, e.g., as detectable labels in biological applications, and as useful materials in the areas

first route are physically confined to a glass matrix and cannot be further processed after synthesis.

[0005] To date, only the high temperature pyrolysis of organometallic reagents has yielded semiconductor nanocrystals that are internally defect free, possess high band edge luminescence, and exhibit size-dependent photophysical properties. In contrast, the chemical synthesis of semiconductor nanocrystals involves the use of toxic precursors and solvents, and the resulting nanocrystals are often surface terminated with organic ligands that are not biocompatible. Consequently, the use of these nanocrystals in biological applications is limited. In contrast, the use of semiconductor nanocrystals in biological applications is limited. In contrast, the use of semiconductor nanocrystals in biological applications is limited.

Pub. No.: US 2012/0228565 A1  
Pub. Date: Sep. 13, 2012

miFIGHT.org  
Analysis Karen Kingston © 2021

Selon US 0028565 A1, les points quantiques répondent aux hautes et courtes fréquences qui émettent de la lumière bleue. À ces fréquences plus élevées, la taille des points quantiques se réduit, ce qui leur permet de se connecter, de recevoir et d'émettre des fréquences du champ quantique.

L'utilisation de la technologie des points quantiques chez l'homme est réglementée par les Centers of Devices & Radiological Health ([CDHR](#)) de la FDA car ce sont des appareils électroniques qui émettent des radiations.

[0033] By “luminescence” is meant the process of emitting electromagnetic radiation (light) from an object. Luminescence results when a system undergoes a transition from an excited state to a lower energy state with a corresponding release of energy in the form of a photon. These energy states can be electronic, vibrational, rotational, or any combination thereof. The transition responsible for luminescence can be stimulated through the release of energy stored in the system chemically or added to the system from an external source.

The external source of energy can be of a variety of types including chemical, thermal, electrical, magnetic, electromagnetic, and physical, or any other type of energy source capable of causing a system to be excited into a state higher in energy than the ground state. For example, a system can be excited by absorbing a photon of light, by being placed in an electrical field, or through a chemical oxidation-reduction reaction. The energy of the photons emitted during luminescence can be in a range from low-energy microwave radiation to high-energy x-ray radiation. Typically, luminescence refers to photons in the range from UV to IR radiation.

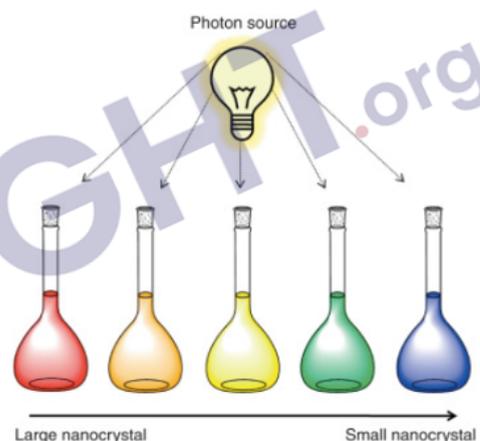
<https://patentcenter.uspto.gov/applications/13423055>

UV = Ultraviolet Radiation  
IR = Infrared Radiation

Selon la publication du livre de 2011, [Quantum Confinement Effect](#), les points quantiques sont capables de produire des étiquettes électromagnétiques (c'est-à-dire [des adresses Bluetooth](#)) à l'intérieur du corps et d'étiqueter les organes.

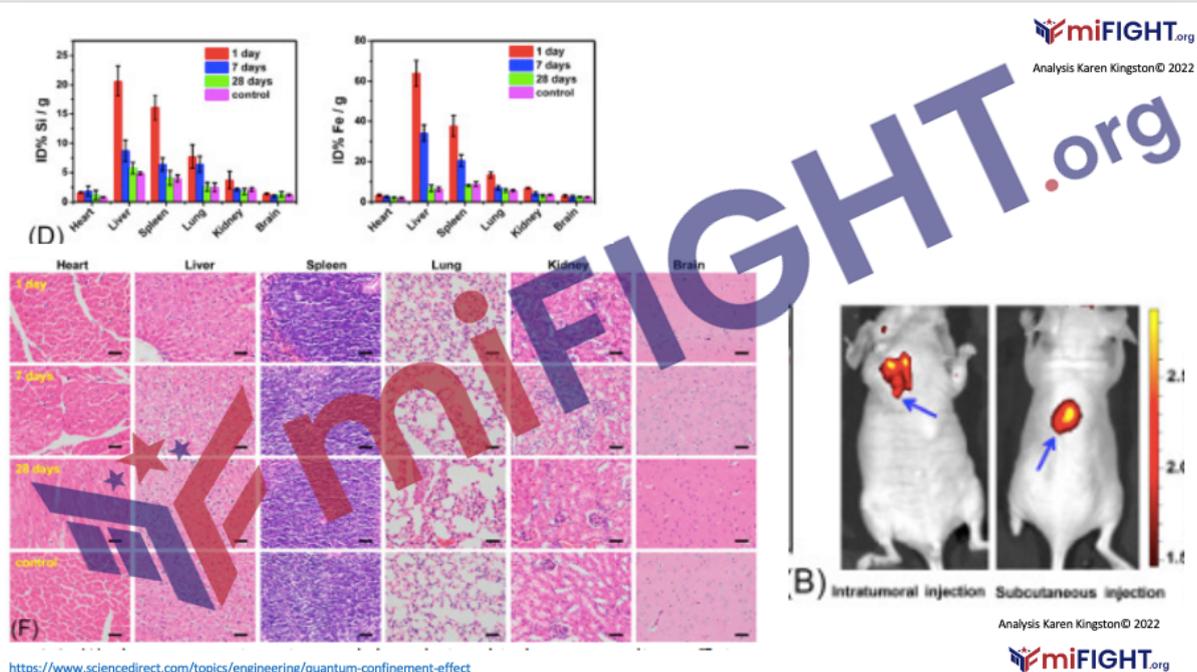
### 3.09.5.3 Semiconductor Nanocrystal Polymer Hybrids

Semiconductor NCs possessing a quantum confinement effect are crystalline structures of  $\leq 100$  nm in one direction, with confined excitons in all three spatial directions, also known as quantum dots.<sup>168</sup> Quantum confinement effect alters the properties of the semiconductor such that photons are absorbed at one wavelength and transmitted at another; hence, these materials are of considerable interest due to their applications as light-emitting devices, solar cells,<sup>168</sup> and biological labels.<sup>169</sup> The optical and electrical properties of semiconductor NCs are size dependent, so a synthesis route that can guarantee a monodisperse size is vital (Figure 5).



<https://www.sciencedirect.com/topics/engineering/quantum-confinement-effect>

Par [effet de confinement quantique](#), des recherches approfondies sur les animaux ont été menées à bien en utilisant des points quantiques pour envahir, cibler et marquer les principaux organes, tels que le cœur, les poumons, les reins, le foie, la rate et le cerveau.



ThermoFisher [Scientific](#), les points quantiques (étiquettes Q-dot) peuvent être utilisé pour [cibler, suivre et tracer](#), non seulement les tissus, mais même les cellules individuelles.

## Qdot Label Conjugates for Cell & Tissue Staining

• [Fluorescence Microscopy Reagents & Assays](#)

### Qdot Label Conjugates for Cell & Tissue Staining

Mounting Media and Antifades

Clearing Reagents for Imaging 3D Cell Culture and Tissue

Imaging Apoptosis Assays

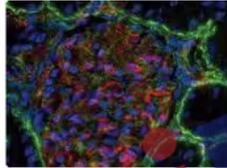
### Learning & Support

Cell Analysis Learning Center

Cell Analysis Support Center

• [Fluorescence Microscopy Reagents & Assays](#)

### Qdot Label Conjugates for Cell &



Detecting low-abundance antigens with even the best conventional dye conjugates can be a challenge, as photobleaching can make it difficult to effectively observe and record staining. The exceptional photostability of Qdot probes conjugates can provide substantial benefits in the detection of low abundance targets. Due to their narrow and symmetric emission spectra, **Qdot probes** are also ideal for multicolor, multiplexed fluorescence detection using a single excitation source such as the 405 nm laser.

[miFIGHT.org](#)  
Analysis Karen Kingston © 2022

#### On this page:

- [Streptavidin conjugates](#)
- [Primary and secondary antibody conjugates](#)
- [Qdot probes for custom conjugations](#)
- [Wheat germ agglutinin conjugate](#)
- [Qtracker cell and vascular labeling products](#)

<http://www.thermofisher.com/us/en/home/life-science/cell-analysis/cell-analysis-imaging/fluorescence-microscopy-and-immunofluorescence/qdot-nanocrystal-conjugates-for-cell-and-tissue-staining.html>

Qdot streptavidin conjugates and conjugation kits

Analysis Karen Kingston © 2022  
[miFIGHT.org](#)

Give Feedback

Le 23 février 2022, [ThermoFisher Scientific a annoncé un accord de fabrication de 15 ans avec Moderna](#) pour les vaccins ARNm COVID-19 de Moderna et d'autres vaccins expérimentaux à ARNm. [ThermoFisher Scientific](#) s'était précédemment associé à Moderna pour fabriquer ses vaccins ARNm COVID-19 en 2021.

## Moderna, Thermo Fisher partner to manufacture COVID vaccine, other drugs



Reuters

Future of Health Supported by Novartis

Sponsors are not involved in the creation of this or any other Reuters news articles



Feb 23 (Reuters) - Moderna Inc (MRNA.D) has entered into a long-term agreement with Thermo Fisher Scientific (TMO.N) for the manufacturing of its COVID-19 vaccine and other experimental medicines based on mRNA technology, the companies said on Wednesday.

Thermo Fisher had already partnered with Moderna last year to help scale up production of its COVID vaccine, branded as Spikevax.

As a part of the 15-year expanded deal, Thermo Fisher would provide dedicated manufacturing capacity in the United States for fill/finish services as well as labeling and packaging services for Spikevax and other mRNA drugs in Moderna's pipeline.

Analysis Karen Kingston © 2022



<https://www.reuters.com/business/healthcare-pharmaceuticals/moderna-thermo-fisher-partner-manufacture-covid-vaccine-other-drugs-2022-02-23/>

WO 148684 A1 fait partie de la propriété intellectuelle de MODERNA US 10703789 B2 et concerne les hydrogels d'opale. Les hydrogels d'opale sont en partie organiques et inorganiques. Cela signifie qu'ils font partie de la biologie et de la technologie.

15 Figure 6a is a series of photomicrographs showing cell viability after treatment with EDTA for up to 7 days. Figure 6b is a bar chart demonstrating the proliferation of cells encapsulated in IOHs.

(19) World Intellectual Property Organization International Bureau

(43) International Publication Date 1 November 2012 (01.11.2012)

WIPO | PCT

(10) International Publication Number WO 2012/148684 A1

South Point Drive, # 319, Dorchester, MA 02125 (US); LL, Weisel, Aileen [CN/US]; 24 Everett Street, Cambridge, MA 02138 (US).

(51) International Patent Classification: A61L 27/14 (2006.01) C12N 5/00 (2006.01) A61L 27/52 (2006.01) B82Y 5/00 (2011.01) A61L 27/56 (2006.01) A61K 9/51 (2006.01)

(21) International Application Number: PCT/US2012/033208

(22) International Filing Date: 12 April 2012 (12.04.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 61/479,774 27 April 2011 (27.04.2011) US

(71) Applicant (for all designated States except US): PRESIDENT AND FELLOWS OF HARVARD COLLEGE [US/US]; 17 Quincy Street, Cambridge, MA 02138 (US)

(72) Inventors; and (75) Inventor/Applicants (for US only): MOONEY, David, J. [US/US]; 27 Pewsitt Road, Sudbury, MA 01776 (US); KIM, Jaeyun [KR/US]; 206 Holden Green, Apt. B, Cambridge, MA 02138 (US); BENCHERIF, Sid [US/US]; 1

(74) Agents: BEATTIE, Ingrid, A. et al.; Mintz Levin Cohn Ferris Glovsky And Popeo, P.C., One Financial Center, Boston, MA 02111 (US).

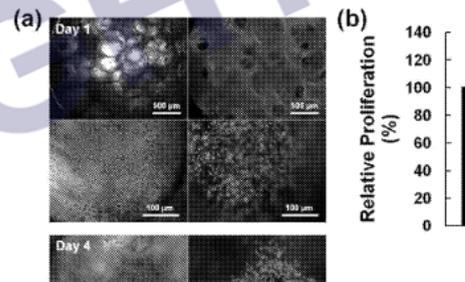
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,

[Continued on next page]

(54) Title: CELL-FRIENDLY INVERSE OPAL HYDROGELS FOR CELL ENCAPSULATION, DRUG AND PROTEIN DELIVERY, AND FUNCTIONAL NANOPARTICLE ENCAPSULATION

Figure 6.

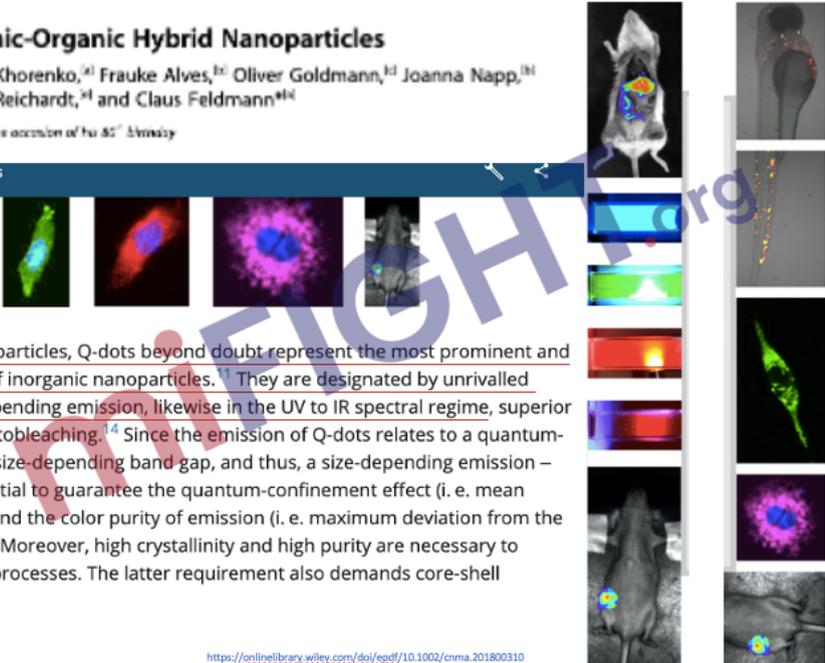


<https://patentscope.wipo.int/search/en/detail.jsf?docid=WO2012148684>

Cette espèce de technologie de biosynthèse hybride est les hydrogels inorganiques-organiques (IOH). [Les points quantiques font partie de la partie technologique des hydrogels IOH](#) et émettent des couleurs vibrantes. [Les points quantiques sont également ce qui donne aux écrans de télévision LED leurs couleurs vives.](#)

**Fluorescent Inorganic-Organic Hybrid Nanoparticles**  
 B. Lilli Neumeier,<sup>1a</sup> Mikhail Khorenko,<sup>2a</sup> Frauke Alves,<sup>1b</sup> Oliver Goldmann,<sup>1c</sup> Joanna Napp,<sup>1d</sup> Ute Schepers,<sup>1e</sup> Holger M. Reichardt,<sup>1d</sup> and Claus Feldmann<sup>1d</sup>  
 Dedicated to Professor Bernd Krebs on the occasion of his 85<sup>th</sup> birthday

About | Sections



Aiming at fluorescent nanoparticles, Q-dots beyond doubt represent the most prominent and most widely applied class of inorganic nanoparticles.<sup>11</sup> They are designated by unrivalled brightness, intense size-depending emission, likewise in the UV to IR spectral regime, superior photostability, and low photobleaching.<sup>14</sup> Since the emission of Q-dots relates to a quantum-confinement effect – i. e. a size-depending band gap, and thus, a size-depending emission – precise size control is essential to guarantee the quantum-confinement effect (i. e. mean particle diameter <math><10\text{ nm}</math>) and the color purity of emission (i. e. maximum deviation from the mean diameter  $\pm 0.5\text{ nm}</math>).<sup>15</sup> Moreover, high crystallinity and high purity are necessary to exclude defect-driven loss processes. The latter requirement also demands core-shell$

<https://onlinelibrary.wiley.com/doi/10.1002/cnma.201800310>

miFIGHT.org  
 Analyst: Karen Kingston © 2022  
 miFIGHT.org

Les points quantiques doivent être encapsulés dans des nanotubes de carbone à paroi unique (SWCNT) dans le cadre de la technologie des nanoparticules lipidiques d'ARNm (LNP) pour être administrés dans le corps humain.

[Le brevet US 02510618 A1](#) fait partie de la propriété intellectuelle de MODERNA US 10703789 B2 et est le brevet du SWCNT. **Le brevet de**

vaccin de la technologie US 02510618 A1 COVID-19 est également la propriété intellectuelle de l'armée chinoise.

**SWCNT**

US 20130251618A1

(19) **United States**  
(12) **Patent Application Publication** (10) **Pub. No.: US 2013/0251618 A1**  
**LI et al.** (43) **Pub. Date: Sep. 26, 2013**

(54) **METHOD FOR MAKING SEMICONDUCTING SINGLE WALL CARBON NANOTUBES**

Publication Classification

**METHOD FOR MAKING SEMICONDUCTING SINGLE WALL CARBON NANOTUBES**

RELATED APPLICATIONS

[0001] This application claims all benefits accruing under 35 U.S.C. §119 from China Patent Application No. 201210075759.7, filed on Mar. 21, 2012, in the China Intellectual Property Office. This application is related to commonly-assigned application entitled "METHOD FOR MAKING SEMICONDUCTING CARBON NANOTUBES," concurrently filed (Atty. Docket No. US45169). Disclosures of the above-identified applications are incorporated herein by reference.

(71) Applicants: **TSINGHUA UNIVERSITY**, Beijing (CN); **HON HAI PRECISION INDUSTRY CO., LTD.**, New Taipei (TW)

(72) Inventors: **JIE LI**, Beijing (CN); **KAI-LI JIANG**, Beijing (CN); **SHOU-SHAN FAN**, Beijing (CN)

(73) Assignees: **HON HAI PRECISION INDUSTRY CO., LTD.**, New Taipei (TW); **TSINGHUA UNIVERSITY**, Beijing (CN)

**Property of Chinese Military**

<https://patentimages.storage.googleapis.com/9e/bc/82/52d2a8e8c97ac2/US20130251618A1.pdf>

miFIGHT.org

Selon un *Breaking Defense* de janvier 2020, « [Nanotubes de carbone et points quantiques : l'armée pense TRÈS petit](#) », Joe Qui, un physicien d'origine chinoise, formé aux États-Unis, devenu ingénieur devenu directeur de programme de l'armée, qui a supervisé la recherche, le développement et l'utilisation des nanotechnologies et des points quantiques avec la 5G sur les bases militaires américaines, a développé la technologie SWCNT à des fins militaires.

Mise à niveau vers payant

# Carbon Nanotubes & Quantum Dots: Army Thinks VERY Small

Carbon Nanotubes

One Army Research Office project is looking to replace traditional silicon-based semiconductors with more efficient carbon nanotubes, program manager Joe Qiu told me. The new technology is particularly useful at the very high frequencies (30-plus gigahertz) and very short wavelengths (millimeter wave) that the telecommunications industry wants to use for 5G networks – including on military bases – and for whatever replaces 5G.

<https://breakingdefense.com/2020/01/carbon-nanotubes-quantum-dots-army-thinks-very-small/>