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# CoVid Vaccines Based on Graphene, Nanonetwork and Internet of NanoThings (IoNT)

Kira Smith, MD., MSc in Experimental Medicine

**Abstract**—It is now practically established that the element graphene, a derivative of graphite and based on carbon, forming nanotubes (CNT) is present in sera, in addition to the presence of other materials derived from it, such as graphene oxide (GO). Graphene is a nanomaterial that possesses exceptional physical, thermodynamic, electronic, mechanical and magnetic properties; it can be used as a superconductor, transducer, absorber of electromagnetic waves, emitter and receiver of signals. It has also been observed that by taking a vial of Pfizer vaccine and allowing the hydrogel to dry, after 3-4 days the presence of nanocircuits can be seen under the microscope [1]: it is the graphene that reacts to electromagnetic fields and electromagnetic microwaves, self-assembles, according to DNA-based nanopatterns to mark the order of construction and electrophoresis/teslaphoresis to trigger the process in the solution materials (hydrogel) into electronic nanocircuits, with real nanoscale components, such as nanorouter, nanoantenna, etc. , formed of graphene, which acts as a signal repeater, since it is radio modulable, i.e. able to absorb electromagnetic waves and multiply their radiation; these electronic components are organized in Quantum Dots (GQDs) and Quantum Cells (QCA), particles that enjoy the above properties of graphene, exponentially greater, thanks to the Quantum Hall effect, especially in environments such as the human body. It will thus create an intracorporal network or nanonetwork, which will detect every vital parameter, but also every slightest variation inside the body, thanks to the advanced and compressed electronics, superimposed on 3D. The collected signals would then be sent, through a gateway connected to the 5G network, on the Internet, to be stored in a huge cloud database and processed by software based on Machine Learning, exploiting the computing power of quantum computers. The ultimate goal could be to store and eventually reproduce what we call "consciousness", in perpetuity.

**Index Terms**—Covid, Covid-19, Vaccines, Graphene, Nanotechnology, Nanonetwork, CORONA, IoNT

## I. INTRODUCTION

In the **blood of vaccinated** persons and also in a **vial of Pfizer vaccine**, samples containing **parallel and perpendicular lines, quadrangular or cubic structures**, composed of **crystallized graphene**, were observed by various **electron microscopy (TEM), phase-contrast, MRI** and other techniques, suggesting **artificial products**, referring to **electronic circuits** [2], [3]. This was possible through a process of **rasterization, focusing and delimitation of the edges of the image**. What was detected was the **circuit of a nanorouter**, which we will see described later, and suggests, along with other images detected, the presence of a **nanonetwork** inside the human body.

**Nanosensors** deployed in **WNSN**, equipped with **graphene-based nanopatch antennas**, can detect symptoms

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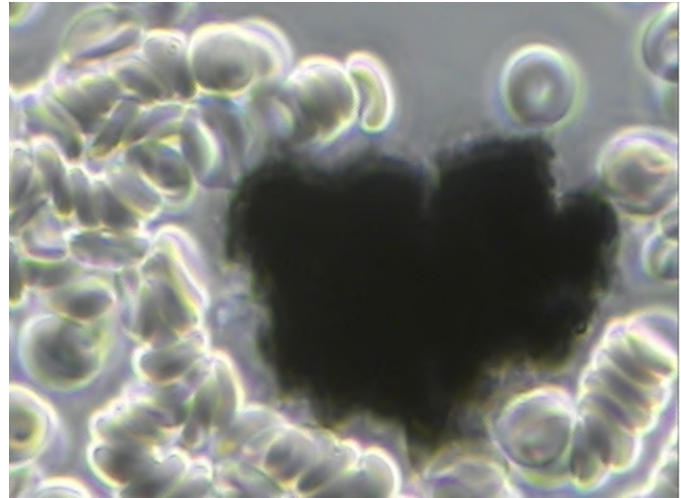


Fig. 1. Micrograph of a Carbon Cluster of Reduced Graphene Oxide (rGO or Graphene Hydroxide) Viewed in the Live Unstained Human Blood with pHase Contrast Microscopy at 1500x. Note that the Red Blood Cells are Clotting in and Around the rGO Crystal in a Condition Known as Rouleau! A French Word Which Means to Chain. Dr. Robert O. Young, Profiles in Medical Microscopy, Hikari Omni Publishing

or **virus** by means of molecules or **bacteria** behaviors. The advancement of graphene-based **biosensors** allows the application of graphene for the **detection of glucose, Cyt-c** (Cytochrome-c), **NADH** (Nicotinamide Adenine Dinucleotide Hydride), **Hb** (Hemoglobin), **cholesterol**, **AA** (Amino Acid), **UA** (Uric Acid), and **DA** (Diamino Acid). [4]

Indeed, a number of **E-Health measures** were implemented during the **COVID-19** pandemic, proportionally to the **progress on BAN** (*Body Area Network*) and **intra-body networks**, in which the **BAN** is a form of **IoNT domain**: [5]

- **Early Diagnosis**: proposed by Doffman in 2020, with replacement of infrared thermometers with thermal camera, optical camera, GPS and LWPAN modules to identify the COVID-19 suspects.
- **Remote Patient Monitoring**: at China, Shanghai Public Health Clinical Center (SPHCC) and seven other hospitals used connected thermometers to monitor the diagnosed patients continuously. *VivaLNK*'s body temperature sensors coupled with *Cassia IoT* Access controller were used and the information about any changes in the body temperature of patients was wirelessly communicated to the nurse station. A single gateway had the capability to pair and connect up to 40 Bluetooth Low Energy (BLE) devices. Furthermore, the data generated by nearly one million connected thermometers was also used for producing daily data about the trends of Influenza-like

Illness (ILI) at United States by Kinsa Health.

- **Quarantine Monitoring:** smart wearable tracking devices have been used by South Korea, Singapore, Middle-Eastern and European countries to detect if recent travelers have broken the quarantine. Different variants of smart wristbands comprise of GPS chips and/or couple with smart phones of the users to track their locations and movements.
- **Preventive Alerts:** IIT-Istituto Italiano di Tecnologia has designed a smartband *iFeel-You* to measure the body temperature and send alerts. Furthermore, the smartband detects the human body movement and identifies the presence of another band in a certain radio range; as soon as it is found that another smartband is in proximity, both vibrate to intimate the users about social distancing. *Immunotouch* is another version of smart wristband which vibrates as the user brings his hand near to his mouth, nose or eye. The wristband is integrated with accelerometer and tracks the movement of hand 10 times in each second.
- **Facility Cleaning:** in Vancouver, IoT buttons have been used to send alerts to the authorities for advising about cleaning and maintenance of the public facilities. These buttons have been designed by the *Visionstate* and known as *Wanda QuickTouch*. The alerts can be sent by public or staff of the facilities such as nursing stations, restrooms, patients' rooms to immediately notify the management or cleaning staff.
- **Contact Tracing For Diagnosed Patients:** an innovative set of wearables have been developed by *Estimote*. In case a person is detected positive for the COVID-19 and as he sets the health state to diagnosed, the device sends an alert to all the people who had been in contact earlier. These devices can also prioritize the list of people by providing details about the time for which each contact was active.
- **Food and Medicine Delivery To Patients:** firstly, the internet technologies integrated with web pages and mobile apps allow the end users to place their orders and secondly, various proposals have been made to use robots or drones to deliver the supplies to patients or quarantined people to ensure social distancing. The home automation technologies such as smart door locks, surveillance cameras, motion detectors and video phones allow the safe and contactless ordering and of supplies.
- **Workplace Safety:** he mobile applications can be provided to the employees which remind them to wash their hands, the wearable devices could be provided to prevent them from touching the face, and range sensors could be used to maintain the safe distance at the public spaces of the workplace such as restrooms or canteens. Another version of contact tracing wearable devices or keychain has been developed by Microshare and Kerlink which are asset tracking companies. As the employees come near to each other, the employees' unique ID's along with the encrypted codes can be stored. The contact data is also uploaded on the secured and centralized database through Low Power Wide Area Network (LoRaWAN), which helps the authorities to trace the contact of the employees

who are tested positive or develop symptoms. [6]

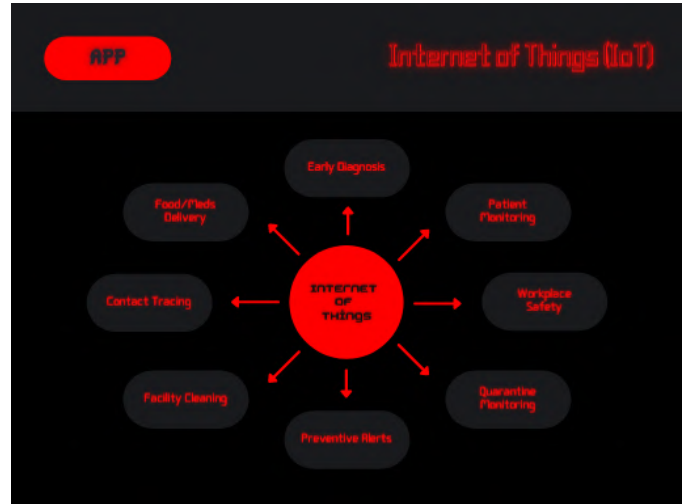


Fig. 2. Pandemic management

Until now, however, no one has gone so far as to implement a **set of sensors** from **inside the body**.

This is how a **nanonetwork** works in a **biological environment**.

## II. MAIN TEXT

### A. NANONETWORK AND NANOCOMMUNICATIONS

The **packet routing system** used is called **CORONA** (*COordinate and ROuting System for NAnonetworks*). [7]

This model requires the **configuration** of **nanonodes** distributed throughout the **body**, i.e., **nanosensors** and **nanopennas**, which have the ability to achieve **high transmission rates** over **very short distances** when operating in the most promising operating spectrum of the **Terahertz band**(0.1 - 10.0 THz), which **propagate** the **signal** to the **other nanonodes**; some of them must be **fixed** and are positioned on the **body tissue** (endothelium, blood vessel walls and tissues of the various organs) like an **anchor**, and **triangulate the position** of the **other nanonodes**, measuring their **distance** and the **hops** in the connection; others are instead **mobile**, since they are present in the **circulatory system**, i.e. **dynamic** with the ability to **aim at specific targets**. In the **operational phase**, the **routing** uses the appropriate **subset of anchors**, required by the **sender** of the packet, to **transmit the data**. This system operates **efficiently**, resulting in **packet re transmission** and **very low loss rate**, promoting **energy efficiency**. [8]

Sending data **outside the body** must be sufficiently **powerful**, while maintaining optimal **signal clarity**, since **skin hydration**, propagation **distance** and **frequency range** affect the loss of **trajectory** that **blurs the signal** and with it the **message**; it is therefore important to use **different frequencies**: **0.1 - 4 THz** to pass through the **epidermis**; for **signal propagation** through the **blood** and resistant **gases in the lungs**, the range is: **0.01 - 0.96 THz**.

Subsequently, the **CORONA** model **was improved** and **simplified**, allowing the transmission of packets to **more distant anchors**, **avoiding intermediate steps**: it was then

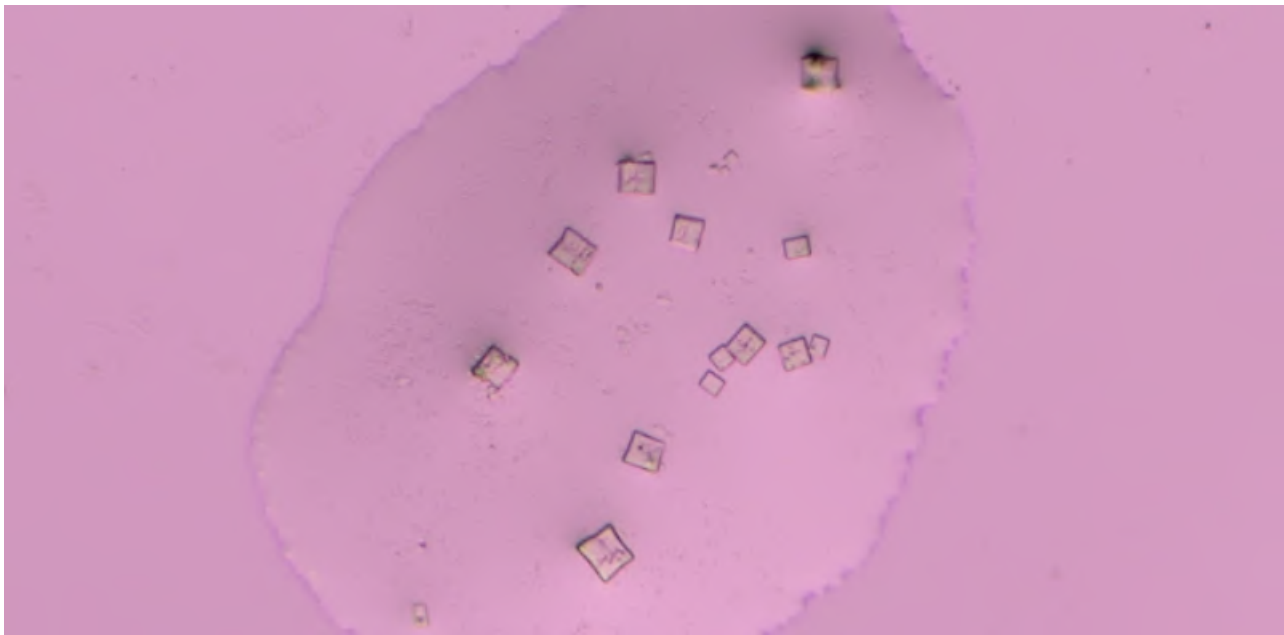


Fig. 3. Pfizer vaccine sample containing apparently artificial structures resembling electronic circuits (Campra P. 2021)

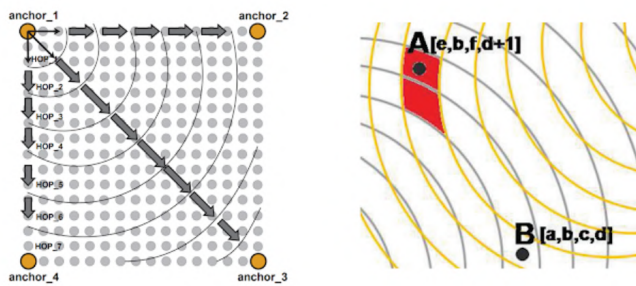


Fig. 4. The figure on the left shows anchored nanonodes facilitating the routing and addressing of data packets, while on the right is shown a limitation in anchor routing (Tsioliaridou, A.; Liaskos, C.; Ioannidis, S.; Pitsillides, A. 2015)

completed with a **multi-hop routing scheme based on a distributed cluster**, with **cluster selection algorithm**; it was then renamed **DCCORONA** [7]

The **protocol** used in **nanocommunications** is called **TS-OOK** (*Time-Spread On-Off Keying*) [9], encoding the **activation and deactivation of time propagation** on and off. It is the appropriate **activation method** by which **request-response/client-server mechanisms** are enabled in this type of networks. A logical **0** or **1** is represented by **silence** (**short pulse**) with a relatively **long transmission interval** (**long pulse**), respectively; this **simplifies the receiver** and **avoids the probability of collisions**, as well as **recovering the signal and interpreting it** without noise or interruptions, given its **simplicity**. Basically, **data packets and headers** are **encoded with 0s and 1s**, according to **IEEE communication protocols**. The **binary-coded signals** are then **transformed into data packets** by the **demux circuit**. The **parallel-to-series converter**, on the other hand, is a **circuit** that can take different sets of input data, carry them on **different QCA wires**, and

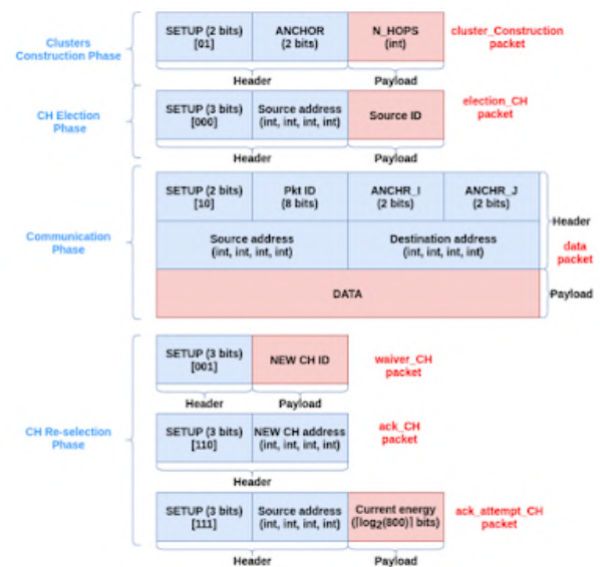


Fig. 5. Data packet structure in the DCCORONA model (Bouchedjera, IA; Louail, L.; Alioutat, Z; Harous, S. 2020)

**transmit them at different times on the output wires.**

This explains why **devices with Bluetooth**, such as smart-phones, are able to **detect MAC addresses**, originating from **people who have received the "vaccine"**: it is inherently taken for granted the presence of a **Media Access Control (MAC)**, in particular it would be likely the **DRIH-MAC** model [10], which is a **receiver-initiated protocol for communication between nanonodes** in a wireless electromagnetic nanorecticle, with the aim of **maximizing energy consumption**; this protocol is a **distributed and predictive technique**



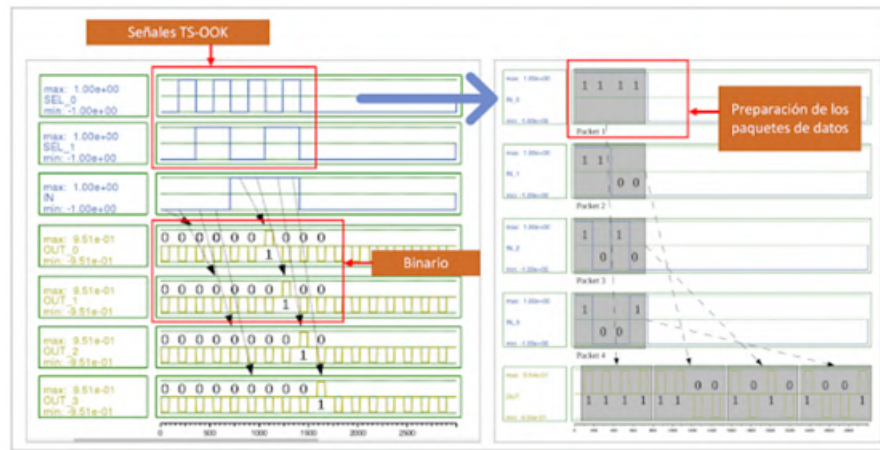


Fig. 6. Demux circuit tests provide evidence of how TS-OOK signals are interpreted and converted to binary code (Sardinha, LH; Costa, AM; Neto, OPV; Vieira, LF; Vieira, MA 2013)

to access the media; the **scheduling of communications** is in coordination with the **process of energy harvesting**, which is **optimized by 50% compared to the MAC protocol** and this is an **essential factor** for the **limitations** related to the **scale and application environment**.

**Bluetooth** can be used in **contact tracing** and **Global Positioning System (GPS)** can be used in monitoring the **real-time** as well as **historical locations** of COVID-19 patients. [6]

The **phenomenon** regarding the **attraction of coins** by **inoculates** could also be explained: although neither **graphene** nor its derivatives are magnetic, both **graphene** and **graphene oxide** can **conduct enough electricity** across **cell membranes** to **magnetize nearby superparamagnetic particles**, to cause widespread magnetization of people receiving the vaccine. [11]

In order to **synchronize communications between nanonodes**, the presence of a **nano-CPU** is essential, which requires at least **one oscillator**, which defines the **clock frequency** (oscillations per second), measured in **Hertz (Hz)**. [9]

**In-vivo** interaction of **nano-oscillators** is given by the ability to **activate them**, via **bio electric signals** and can be used to **selectively rectify the operating frequency** of a given **field**. For example, nano-oscillators can **harvest wireless energy** and produce **wireless electrical stimulation** of cells such as **neurons**.

In the **topology** hierarchy, there are **next the nanorouters**, which **receive signals from the nanonodes**, **process them** and **send them to the nanointerfaces**, which will **emit them outside the body**, with **signal effective** to cross the **skin barrier**. They are **needed to route and decode the signals for sending**, but also for **receiving**.

To form a **nanorouter** it is necessary to have **wire crossings** that create **several overlapping circuit structures**: **logic gates**, **demultiplexer (demux)** and **parallel-series converter**. [9]

Going back to the **circuit** observed by **Prof. Campra** during the observance with **electron microscopy** of the **blood of vaccinated people**: the **quantum cell (QCA)** consists of

**4 quantum dots (GQDs)**, whose **polarization** is **variable**. It is possible to distinguish the **binary code**, consisting of **0 and 1**, based on the **positive or negative charge** of the **quantum dots**. A **QCAcell** would require **4 GQDs (regions where an electric charge may or may not be localized)** to compose itself. Each **cell** has **2 free moving electrons**, which can create **tunnels** between the **quantum dots**, but tunneling to the **outside of the cell** is **not allowed**, due to a **high potential barrier**. This circuit represents a **nanorouter**, but through the **combination of QCA cells** it is possible to **obtain electronic schemes of transistors, processors, multiplexers, demultiplexers, etc.**, with **various functions and shapes**. [12]

## B. DEPLOYMENT

Regarding the **bidirectional capacity** of the **nanorouter**, I point out that **graphene** -and therefore the entire **nanonet-work-** can **cross the blood-brain barrier**, sometimes **carrying** other **substances** (e.g.: improving the **targeting** of some **drugs**); it is therefore likely that in the **near future thoughts, memories, sensory perceptions** and everything that we now call "**consciousness**" will also be detected.

It is not known whether those who have already **received the vaccine**, once the nanonetwork within the entire body will be formed, will be **influenced in thought and behavior**, in their **actions**, through a **controlled release** of **neurotransmitters** and **catecholamines** (dopamine, serotonin, norepinephrine, etc.) or **other hormones**, going to enhance or impair some characteristics, in favor or to the detriment of others: it is possible to **level emotions**, change the **degree of perceived satisfaction**, increase **attention**, promote **learning** or inhibit it, even **enabling** the phenomenon of **subliminal (unconscious) conditioned learning**.

For these reasons, however, **future pandemics** will be **managed optimally**, through **predictive algorithms of contagions**, just as many of the **current chronic diseases** will be **treatable**, through **sending stimuli** to the **release or inhibition**

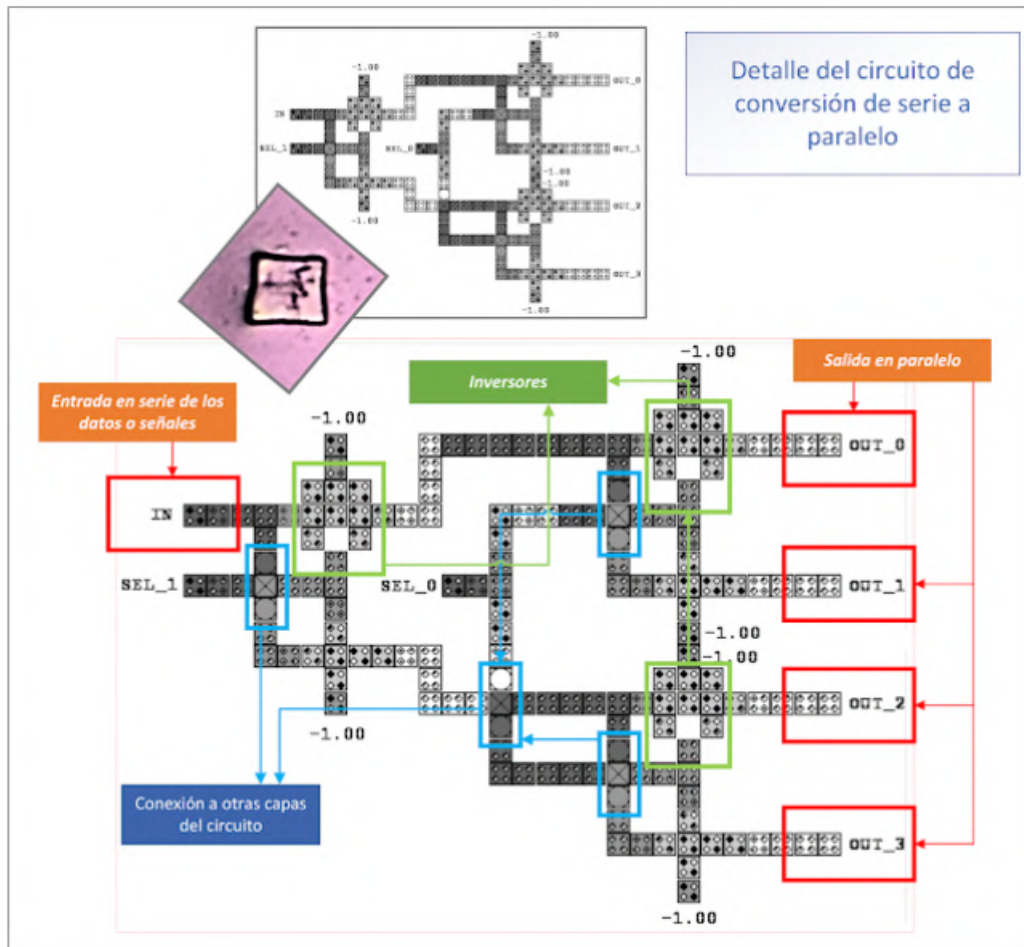


Fig. 7. Details of circuit to convert TS-OOK signals in series to a parallel output, confirming one of the typical tasks of a router (Sardinha, LH; Costa, AM; Neto, OPV; Vieira, LF; Vieira, MA 2013)

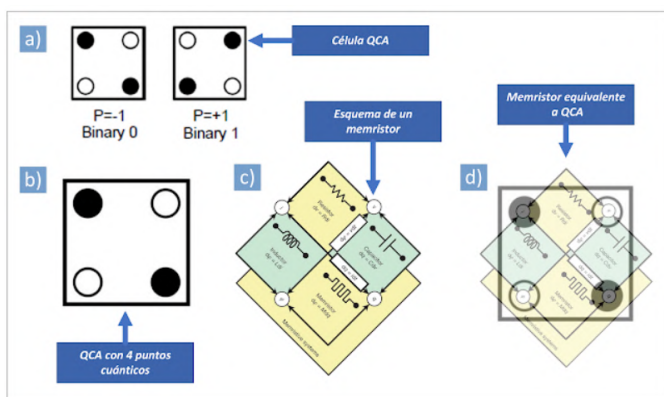


Fig. 8. QCA cell consisting of 4 quantum dots (Sardinha, LH; Costa, AM; Neto, OPV; Vieira, LF; Vieira, MA 2013 | Strukov, DB; Snider, GS; Stewart, DR; Williams, RS 2009)

of certain **elements in the body**, depending on whether they are **needed** (or **deficient**), or **in excess**. [4]

The computing **power of quantum computers** and the **flexibility of Machine Learning** will be combined with the **speed and zero latency** of the **5G network**, to **transmit the**

**data** of each individual. [5]

After all, the **Internet of Things (IoT)** has made **objects "smart"** by sending data, parameters, sometimes initial processing of the same, before reaching the destination clouds.

How much longer can **humans** stay out of it? It is already inside the **Internet of NanoThings (IoNT)**, but does not realize it, although it is not known whether the **WNSN** is **hierarchical** architecture, i.e. with **bottom-up transmission** (from nanosensors to nanorouters) or **non-hierarchical**, with **autonomous components** in data and signal recording, transmission, activation and programming. [5] The **non-hierarchical topology**, at the same time as the **hierarchical topology**, remains the **most likely option**, given the properties of **graphene**: it is inherently **tunable**, so it is possible to create an **SDM (Software Defined Metamaterial)** that allows drivers to modify the electrostatic **bias** applied to different areas of the graphene sheet. Graphene can in essence be controlled and programmed like **software**, in its various layers. [13]

### C. SELF-ASSEMBLING

In recent years, graphene-based biodevices, such as **DNACarriers**, **graphene nanopores** for **DNA sequencing**,

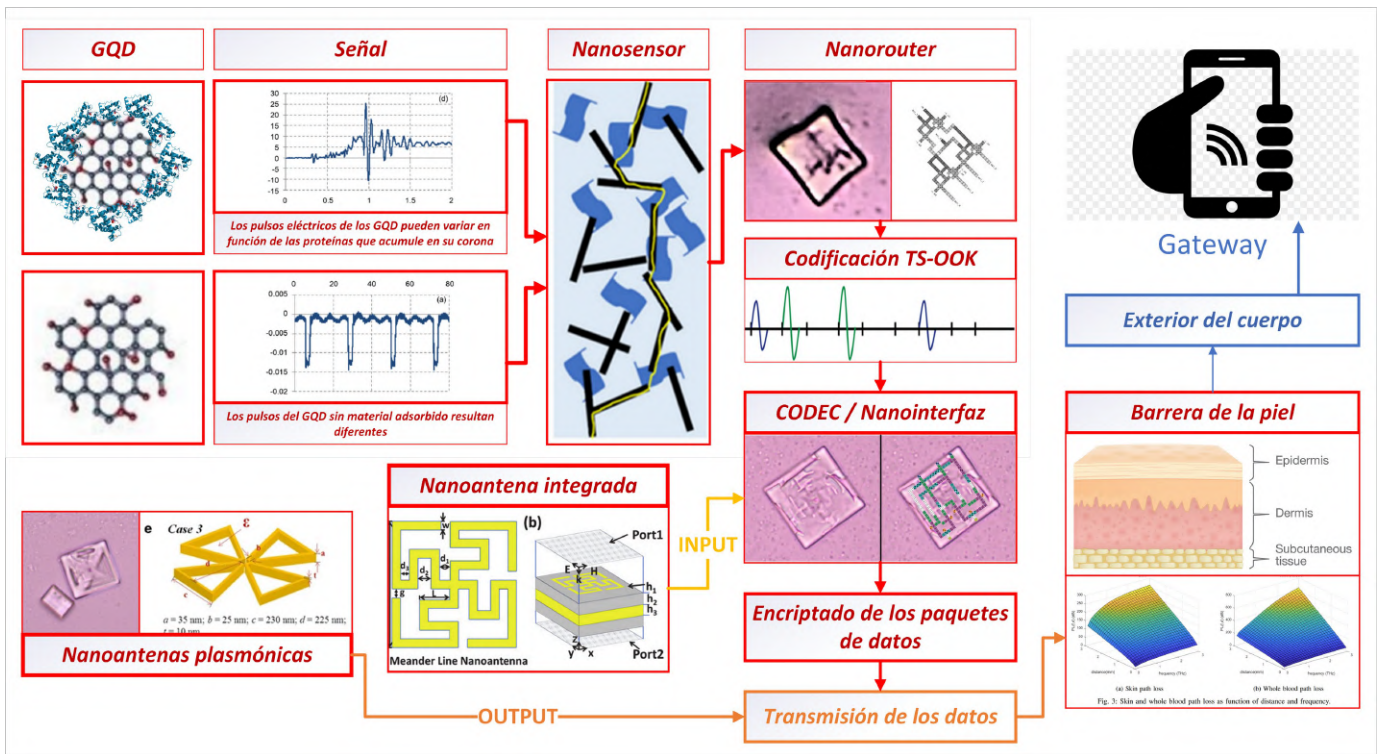


Fig. 9. Intracorporal Network

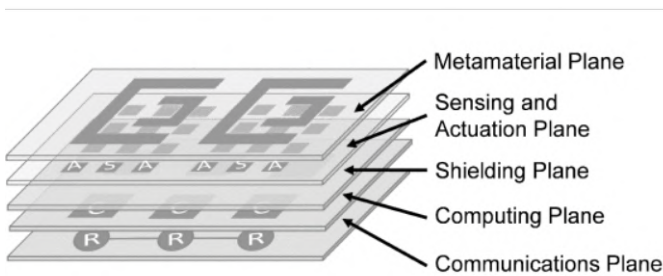


Fig. 10. Diagram of the logical structure of a software-defined metamaterial, graphene being the metamaterial explicitly mentioned by the authors (Abadal, S.; Liaskos, C.; Tsioliariidou, A.; Ioannidis, S.; Pitsillides; Sol'e-Pareta, J.; Cabellos-Aparicio, A.2017)

and a **graphene–DNA biosensor**, have been highlighted with extraordinary sensitivity, rapid readout and good biostability. [14]

**Graphene** is an excellent **substrate** material for adsorption and also for spatial patterning of **DNA origami** structures. The strategy is to integrate the top-down patterning of **chemically modified graphene** through conventional **photolithography** with bottom-up **self-assembly** of **DNA origami structures** upon the **patterned** chemically modified graphene. The **adsorption** of DNA origami structures can be systematically tuned to allow **spatial patterning** on chemically modified graphene. [14]

#### D. HEALTH RISKS

However, it must be pointed out that **graphene is highly toxic in any form** it is presented and taken into the human

**body**, in fact **its presence has not been declared** among the **components** of the "**vaccine**" by the pharmaceutical company. From studies that have emerged, **graphene**, hence the basis for the nanonetwork, seems to be present in **all "vaccines"**, **except for AstraZeneca**, which, perhaps not by chance, **was eliminated from the market**, claiming **responsibility** for numerous **adverse effects**, even **lethal**, even though, in reality, it presented about **the same probability** (slightly higher) of developing **pathologies** or incurring sudden **cardio/cerebrovascular accidents**, compared to other serums.

Returning to **graphene and its derivatives**, it is possible to say that it is **highly thrombotic**, in fact, **coagulated blood** has been **examined** by several researchers: first of all **Prof. Campra**, but also **Dr. Robert O. Young**, who has published **all his studies and findings**, in great detail on his **personal website**: [15]

*Nano and Micro Graphene Tubes Cause Pathological Blood Coagulation Leading to Hypercapnia, Hypoxia and Death*

*Dr. Robert O. Young, MD., DSc, PhD, in Hikari Omni Publishing , 2021*

and other scientists, among which **Dr. Jose Louis Sevillano** has distinguished himself for the **warnings** launched **against the introduction of graphene** in the population. In addition, the said **nanomaterial** presents **genotoxicity**, **mutagenicity**, high **pulmonary toxicity**, causes **damage** to the **circulatory and cardiovascular system**, **nervous system**, **endocrine**, **reproductive**, **urinary**, can lead to **apoptosis** (cell death), severe **inflammatory state**, **immunosuppression**, up to **multi-organ dysfunction**.



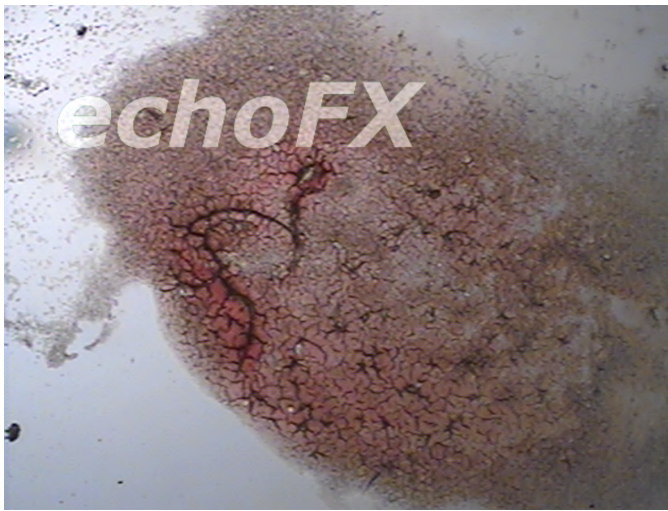


Fig. 11. Viewed Under Bright Field Microscopy a Nanotube and Microtubes of Graphene Oxide in the Dried Coagulated Blood Cells or a Blood Clot (Dr. Robert O. Young, Hikari Omni Publishing, 2021)

Recall also, that the **artificial electronics** that are going to form from **graphene in hydrogel**, by electrophoresis and teslaphoresis, in response to magnetic fields and electromagnetic (EM) waves, can easily **affect in a negative mode the electrical conduction of the heart and brain**, thus leading to **lethal fibrillation (arrhythmia) or neurological disorders** of considerable magnitude. [16]

### III. CONCLUSIONS

So there are still many **question marks**, such as the **premature demise** that will happen to some **vaccinated**, but will allow the **eternal survival of consciousness** for others. Certain aspects, **behaviors** (eg: race to the vaccine and hatred for the unvaccinated) probably, are part of **evolution** and as such have an explanation of **instinctive matrix**, unless it is not already in place an **unknown form of mental control and induction to act to achieve a goal unconsciously**.

It is clear, then, how this is an **obligatory step for humanity**, beginning in these years to lay the foundations for intracorporal nanoreality and concluding, in my estimation, **within a century**.

There are **links** on the web **to godeeper**, but if you look for information on **graphene** material, **nanotechnology related to biology** and the **Internet of NanoThings**, a **new world** will open up, where **academics** already know and take for **granted** and normal everything I have described in this research.

### IV. LIST OF ABBREVIATIONS

**BAN**: Body Area Network  
**BLE**: Bluetooth Low Energy  
**CNT**: Carbon Nanotubes  
**CORONA**: Coordinate Routing System for Nanonetworks  
**Demux**: Demultiplexer  
**EM**: Electromagnetic Microwaves  
**GO**: Graphene Oxide  
**rGO**: Reduced Graphene Oxide

**GQDs**: Graphene Quantum Dots  
**Hz**: Hertz  
**IEEE**: Institute of Electrical and Electronics Engineers  
**IoT**: Internet of Things  
**IoMT**: Internet of Medical Things  
**IoNT**: Internet of NanoThings  
**LoRaWAN**: Low Power Wide Area Network  
**MAC**: Media Access Control  
**ML**: Machine Learning  
**MRI**: Magnetic Resonance Imaging  
**Mux**: Multiplexer  
**QCA**: Quantum Cellular Automata  
**SDM**: Software Defined Metamaterial  
**TDMA**: Time-Division multiple access  
**TEM**: Transmission Electron Microscopy  
**THz**: Terahertz  
**TS-OOK**: Time-Spread On-Off Keying  
**WNSN**: Wireless Nanosensors Network

### V. AVAILABILITY OF DATA AND MATERIALS

All material, data and figures are shared **publicly**, as **open access** articles, or **preprint** papers on *ResearchGate*.

### VI. FUNDING

There are **not grants or funders**. The author also didn't receive any compensation for her work.

### VII. COMPETING INTERESTS

The **author** declares that the research was conducted in the **absence of any commercial or financial relationships** that could be construed as a potential **conflict of interest** and all work was developed with her own funds.

### VIII. DECLARATIONS

The undersigned **Kira Smith** claims to be the **sole author** of this research paper and to have had no collaborators.

### IX. ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not required, as there are **no studies in human or animal** subjects.

### X. AUTHORS' INFORMATION

Dr. **Kira Smith** was born in the **1988**, in **Novara**, Piedmont, **Italy**. She graduated in **2008** in **Computer Science High School Diploma** and in 2013 she degree in **Medicine** at the **University of Studies of Turin**, then she attended the **Experimental Medicine Master of Science** course, at the **Queen's University Belfast**. She has **worked** for major **Cybersecurity** companies and in many **hospitals** and **ASL** in Italy, like **Policlinico di Torvergata** in Rome and **Maggiore della Carità** in Novara.

### ACKNOWLEDGMENTS

None.



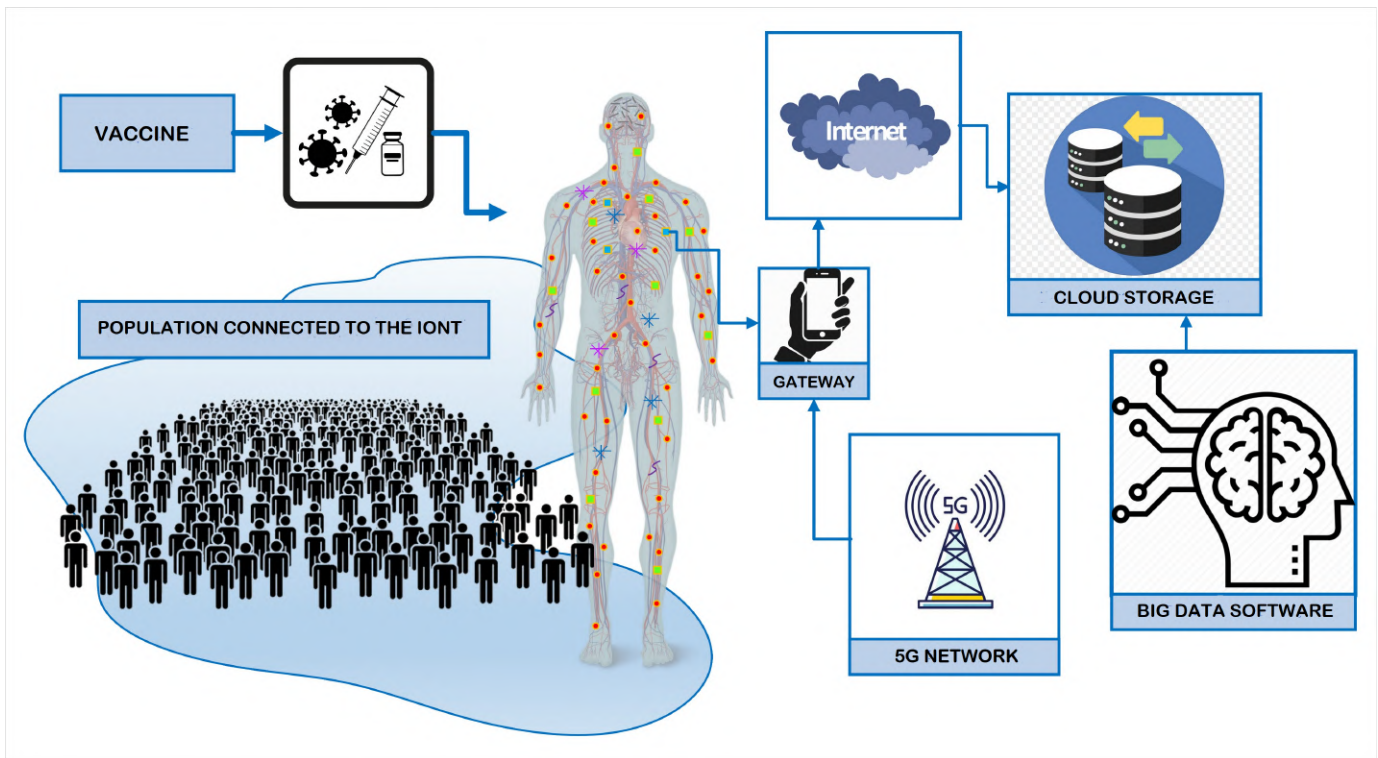


Fig. 12. Intracorporal Nanonetwork for IoT

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