

PHONE OF THE FUTURE

A GRAPHENE ENHANCED PHONE COULD INTEGRATE SEVERAL TECHNOLOGIES DEVELOPED FROM CURRENT GRAPHENE FLAGSHIP RESEARCH

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ANTENNA & COMMUNICATIONS

Graphene can be used to enhance optical data communication to unprecedented rates, while reducing energy consumption and transmission errors. The Graphene Flagship targets data links well above 400 gigabit per second by 2020. Graphene could also be the base of flexible, near field communication (NFC) antennas, allowing for the creation of new technologies like electronic banknotes or smart wallets.

PROCESSOR & ELECTRONICS

The electronic properties of graphene make it ideal for creating faster, more reliable components for our phones. Graphene is strong and highly conductive but also really thin – just one atom thick. This could lead to tinier, yet faster microprocessors for smart objects and the Internet of Things. GRMs are flexible, allowing devices to be integrated in textiles or even 'stickers' on our skin.

Source:



SCREEN

Screens using graphene could have force sensors, bringing a new dimension to touchscreen technologies. Moreover, thanks to graphene's high flexibility, we could integrate all these new properties in flexible screens, which could be useful in wearable technology.

SENSORS

Graphene sensors could be useful for many applications: communicating with wellness sensors all over our body monitoring dangerous infections, oxygen and sugar levels, correcting our posture or even helping us track the progress of neural diseases. Sensors could also analyse our environment.

HEADPHONES/SPEAKERS

GRMs could make headphones and speakers more energy efficient and tinier, while producing a better sound. When membranes are light, they are usually too flexible and produce unwanted vibrations and noises. Graphene is flexible, yet strong, so the distortions are reduced, and one can enjoy their favourite music with unprecedented clarity!

BATTERY

Graphene could be used to improve the capacity, efficiency and stability of batteries. Graphene batteries could have higher energy storage and better performance over a lifetime of use and re-charging. Graphene and related materials (GRMs) can also be used to better the properties of other energy storage solutions like supercaps.

CASE

Graphene is a very strong material. Mixed with resins and plastics, or even just as a coating, graphene can be used to make safer helmets, stronger aeroplane parts and more resistant construction materials. Incorporating graphene and related materials into the casing of the phone of the future could make it much more robust. We may never need to worry about dropping it again!