Graphene for energy solutions

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A review presentation focuses on the applications of graphenes in electrochemical energy storage devices that Nokia R&D UK has developed. It covers from the liquid based graphene manufacturing to the application of graphene inks in batteries and supercapacitors. Recent progress in electrochemical exfoliation of graphene is also covered. We also demonstrated that even monolayer graphene has the power to light up an LED [4] and graphene is a more robust electrode in batteries than traditional graphite [5]. This work is part of the recent EU Graphene Flagship Pilot, which was granted 1 billion EURO by European Committee.

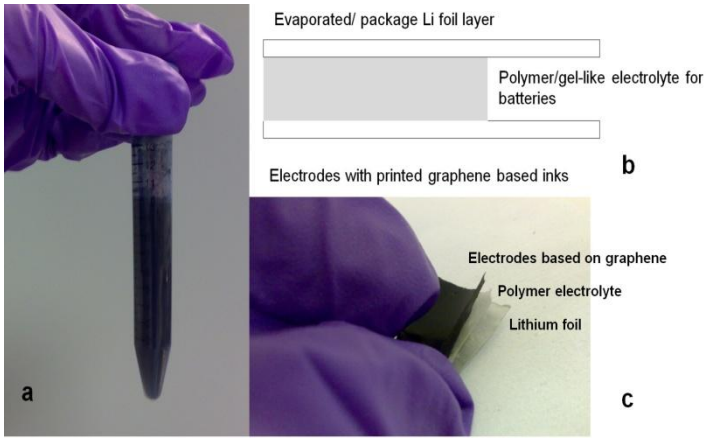

Figure 1. a) Graphene inks b) and c) Structure and image of the rechargeable lithium battery based on graphene-ink cathode and polymer electrolyte. Figure 2 Monolayer graphene battery lights up LED

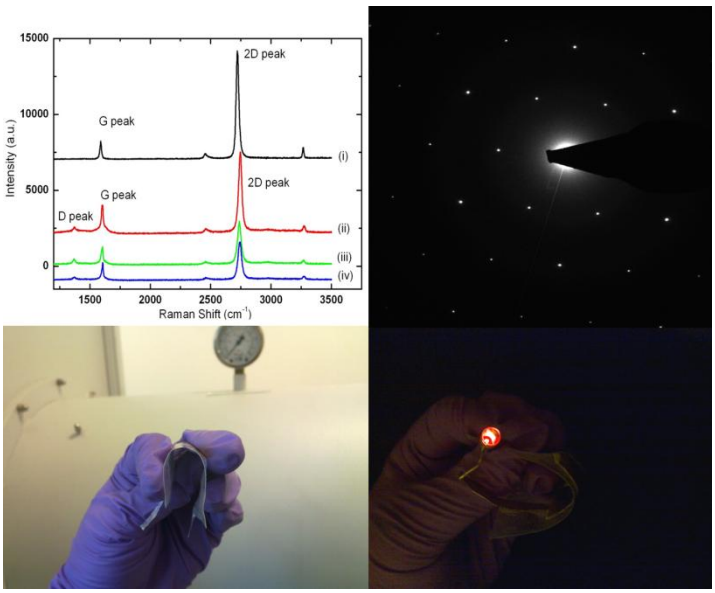

Figure 2. Monolayer graphene battery lights up LED

References

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