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Prototype demonstrators of graphene photodetector applications and future prospects

Graphene photodetectors are ideal for ultra-sensitive detection of visible and infrared light [1,2], but they can also be made flexible and even partially transparent. This makes this detection system an enabler for unique applications [3,4].

Here, we will show working prototype demonstrators of several graphene-based photodetection applications. One tangible example we present is a wearable health monitor that is flexible and transparent, and fully integrated with hybrid graphenequantum dot detectors.

Additionally, we show the progress of monolithic integration of graphene with Si-CMOS electronics for infrared imaging applications (such as night vision).

Finally, we show the most recent progress on ultra-fast graphene photodetectors for data communication applications.

References

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