

## Investigation of the optical properties of single nanographene

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Graphene is a key material for nanoelectronics. Nevertheless, its zero gap makes it unsuitable for applications needing semiconductors with sizeable energy gaps. One way to open a gap in graphene is to use size reduction effects. The reduction of one dimension leads to carbon nanotubes and graphene nanoribbons that are 1D carbon nanostructures. Reducing one more dimension leads to 0D graphene quantum dots. The optical properties of carbon nanotubes have been investigated for approximately 20 years, while the study of graphene quantum dots and nanoribbons is at its infancy. Among potential application of these sp<sup>2</sup> carbon nanostructures, the use of graphene nanoribbons and quantum dots as light emitters attracts a lot of attention. Here, I will present our recent results on the investigation optical properties of single nanographenes synthesized by bottom-up chemistry [1-4].

### References

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