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## Sorted carbon nanotubes for optoelectronics

# physikalisches

Electronic devices that source, detect and control light are important elements for the development of on-chip information-processing technology based on light.

Carbon nanotubes are prototype low-dimensional nanostructures with unique electronic and optical properties, and their potential for optoelectronics is currently explored. In my talk I will report about the development of the field including our own work on waveguide-integrated nanotube light emitter [1-3].

I will also give a brief overview on the advancements in sorting of carbon nanotubes and the methods available for obtaining nanotubes with well-defined electrical and optical properties.

### References

- [1] S. Khasminskaya et al., *Advanced Materials* 26 (2014), pp. 3465.
- [2] F. Pyatkov et al., *Nature Photonics* 10 (2016), pp. 420.
- [3] S. Khasminskaya et al., *Nature Photonics* 10 (2016), pp. 727.

Mo. 19.12.16  
16:00 Uhr  
Ort: H34