

# Center for Applied Nanotechnology

## CANdot® Series C

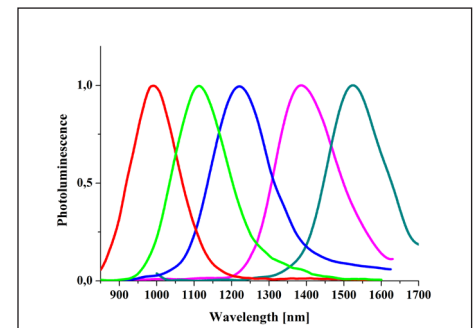
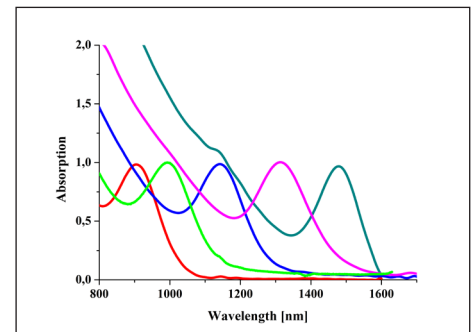
**CANdot® Series C:** fluorescent nanoparticles covering the infrared wavelength range from 1000 to 1600 nm in emission. Because of our unique expertise in the production of homogeneously dispersed inorganic nanoparticles, our CANdot® Series C particles exhibit a spherical shape combined with narrow size distribution. Long term stability against heat, bleaching and oxidization is guaranteed either in solution or coatings.



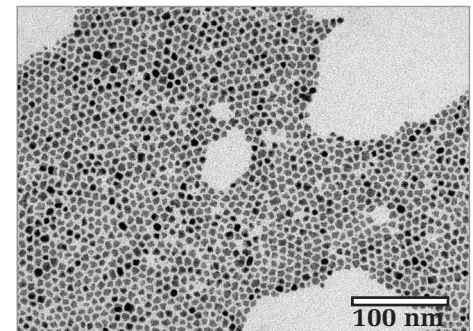
An innovative continuous flow process allows production even in 10 gram per day scale with reduced costs. Another advantage over previous production processes is the tremendous reproducibility of particle properties.

Due to their tunable bandgap in the IR, our CANdot® Series C particles absorb all light in the UV, VIS and NIR up to 900 nm. This predestines them as light absorbers in solar cells, sensoric applications, detectors and photodiodes.

Larger amounts of our nanoparticles or customizations can be inquired at [candots@can-hamburg.de](mailto:candots@can-hamburg.de).



CANdot® Series C – Absorption (top) and fluorescence measurements (bottom)



CANdot® Series C – TEM image

Features		Advantages	
Material	PbS (semiconductor)	Continuous flow production	highly reproducible
Particle size (diameter)	3 to 8 nm	Production throughput	10 g per day
Concentration	10 mg/ml in toluene (ask for alternatives)	Surface shielded by organic ligands	prevents particle agglomeration
Emission maximum	1000 – 1600 nm (tolerance 40 nm)	Small particle size distribution	narrow fluorescence band
Bandgap	0.8 to 1.3 eV	Performance compared to organic dye	enhanced stability and quantum yield

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