

Center for Applied Nanotechnology

Material Science

Nanoparticles – Standardized

CAN GmbH has developed a variety of nanoparticle systems from different classes of materials – **CANdot®**. They persuade with highly reproducible size, narrow size distribution, enduring stability and dispersibility. As standard products, currently three series are available. **Series A** summarizes **quantum dots** on the Basis of II-VI semiconductor materials as core, core/shell and core/shell/shell particles. **Series M** contains **ferromagnetic and paramagnetic nanoparticles** based on the magnetic properties of iron and gadolinium. **Series X** (formerly known as REN-X®) summarizes **rare earth doped dots** of different UV excitable emission colors. CAN GmbH has the expertise to disperse the dots in the solvent adapted to customers needs.

Series A	Series M	Series X
<i>Quantum Dots</i>	<i>Magnetic Particles</i>	<i>Rare Earth doped Dots</i>
<ul style="list-style-type: none"> • CdSe • CdSe/CdS • CdSe/CdS/ZnS 	<ul style="list-style-type: none"> • Fe₃O₄ • GdPO₄ • GdV_{1-x}P_xO₄ (0<x<1) 	<ul style="list-style-type: none"> • YVO₄:X (red & red360) • LaPO₄:X (green) • BaSO₄:X (blue & yellow)

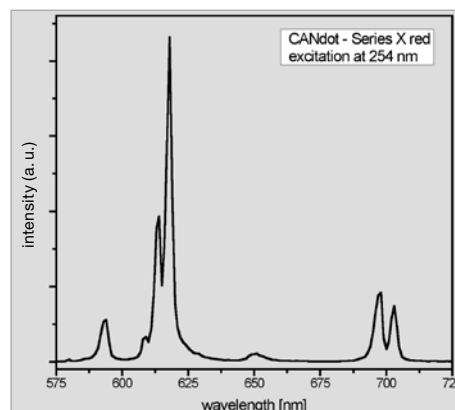
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Furthermore CAN GmbH offers the **development of particles** based on requested specifications. The broad knowledge in nanoparticle synthesis allows the CAN GmbH to design the solution to your **individual needs**. Along with the development of the particle of choice, CAN GmbH also offers the **production** of these nanoparticles on a gram to kilogram scale, depending on the material.

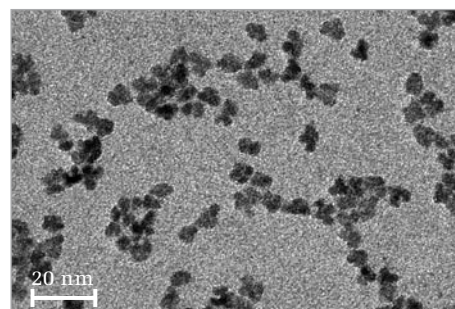
CAN GmbH offers companies and research institutions contract research and development services in the area of nanotechnology and participates in national and international research programs. The focus of activities is on the utilization of new findings made in chemical nanotechnology and analysis, particularly in the areas of consumables, special polymers and health care. The main areas of expertise include the production of numerous nanoparticulate materials, the encapsulation of active substances, the development of toxicity assays as well as the development of nanoparticle-based biological and medical markers.



CANdot – Series A – UV excited emission



CANdot – Series X red – emission spectrum



CANdot – Series X green – TEM image

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