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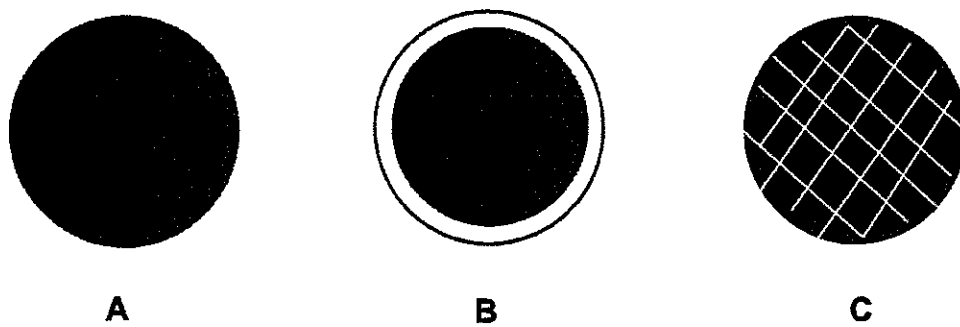


Fig. 1 (prior art)

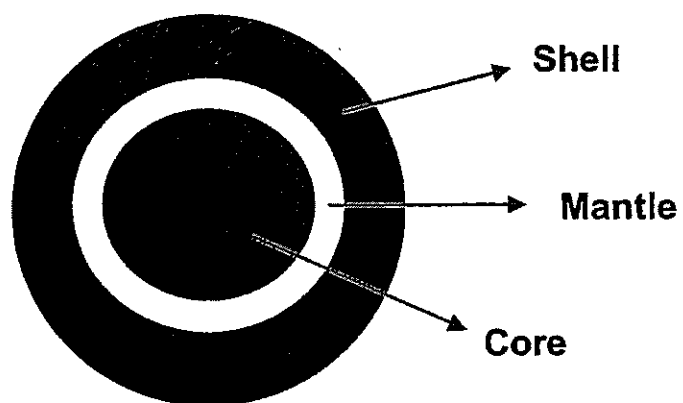


Fig. 2

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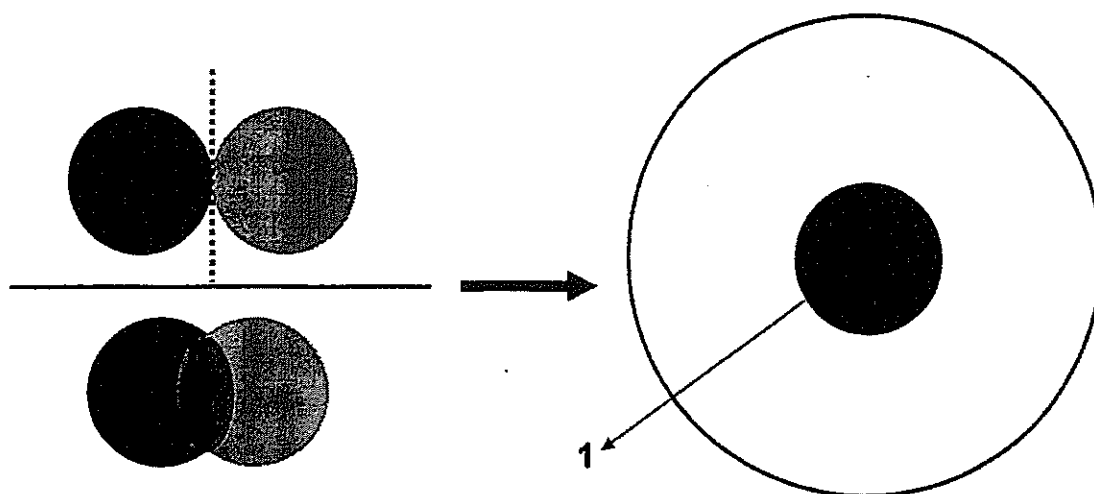


Fig. 3

In-situ core formation

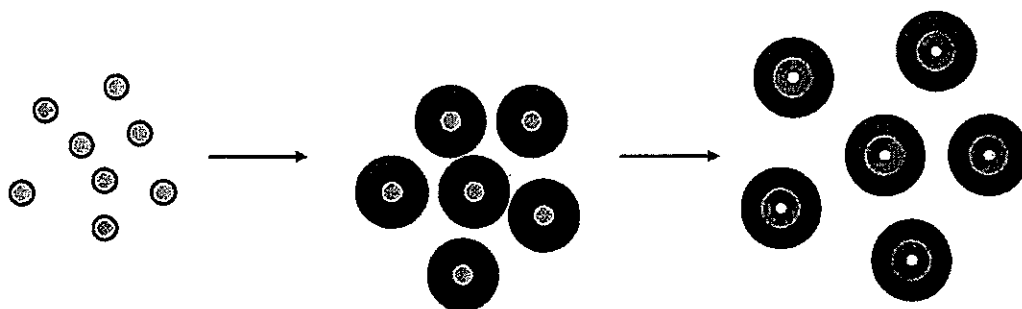


Fig. 4

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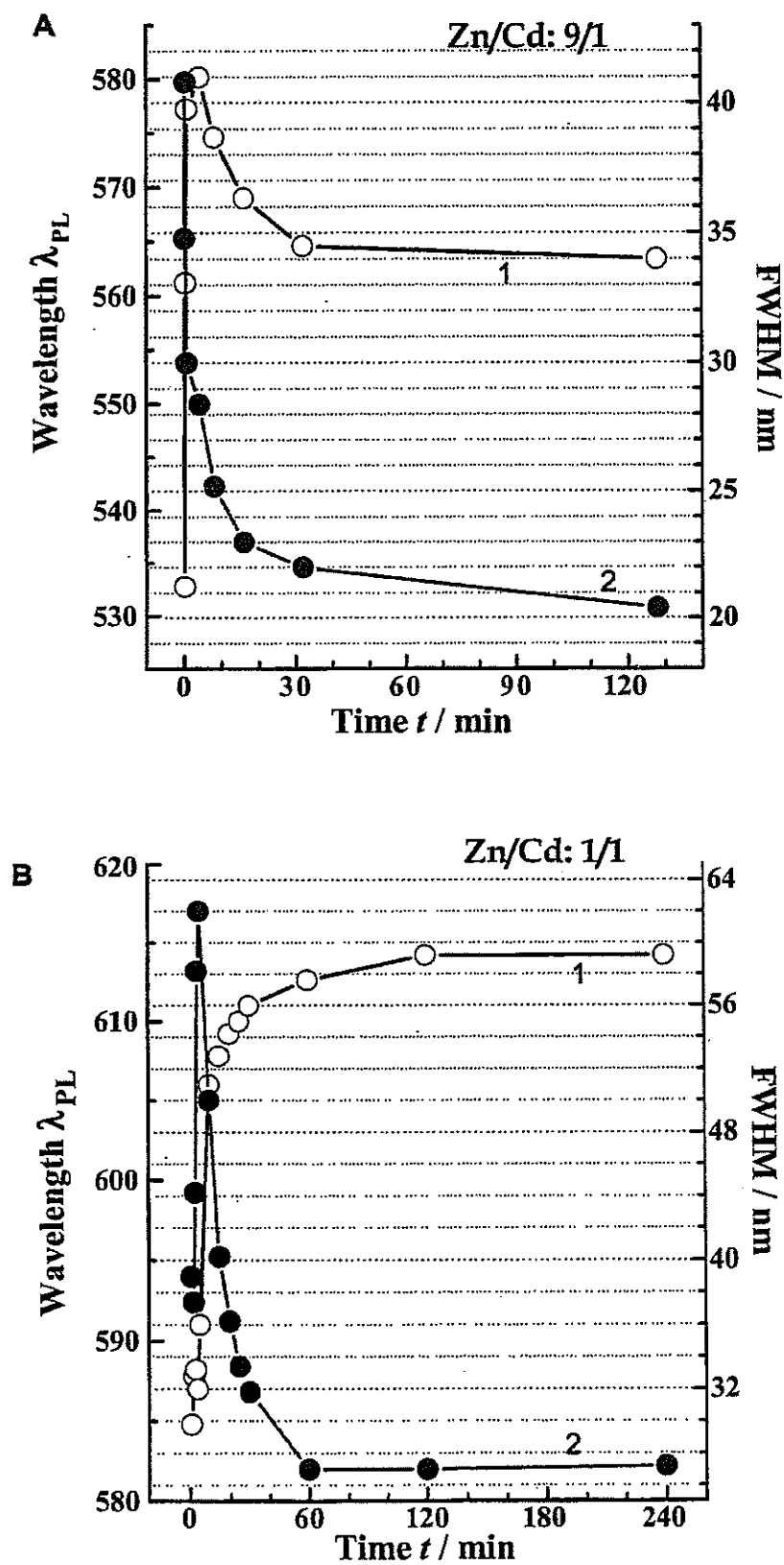


Fig. 5

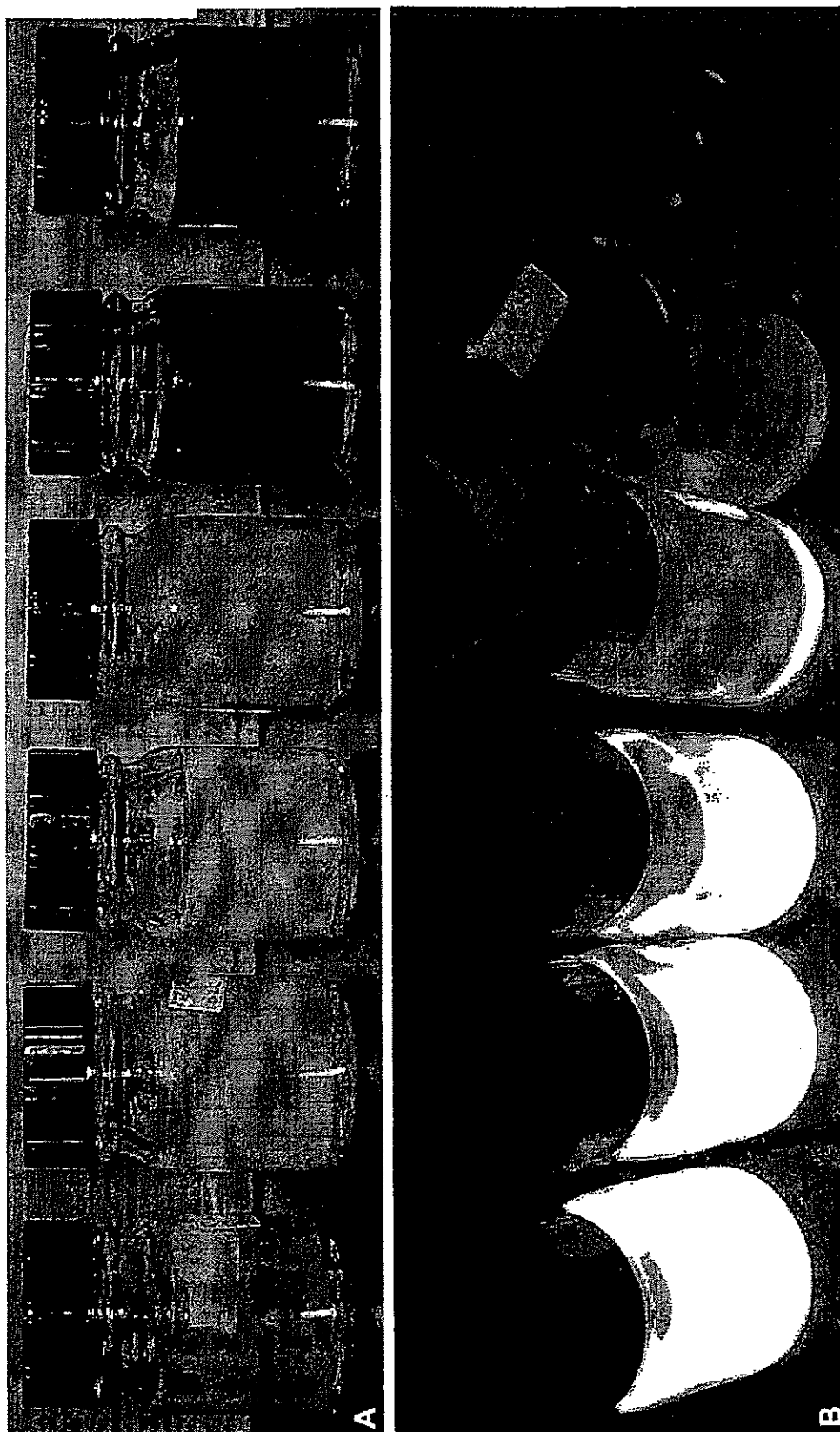
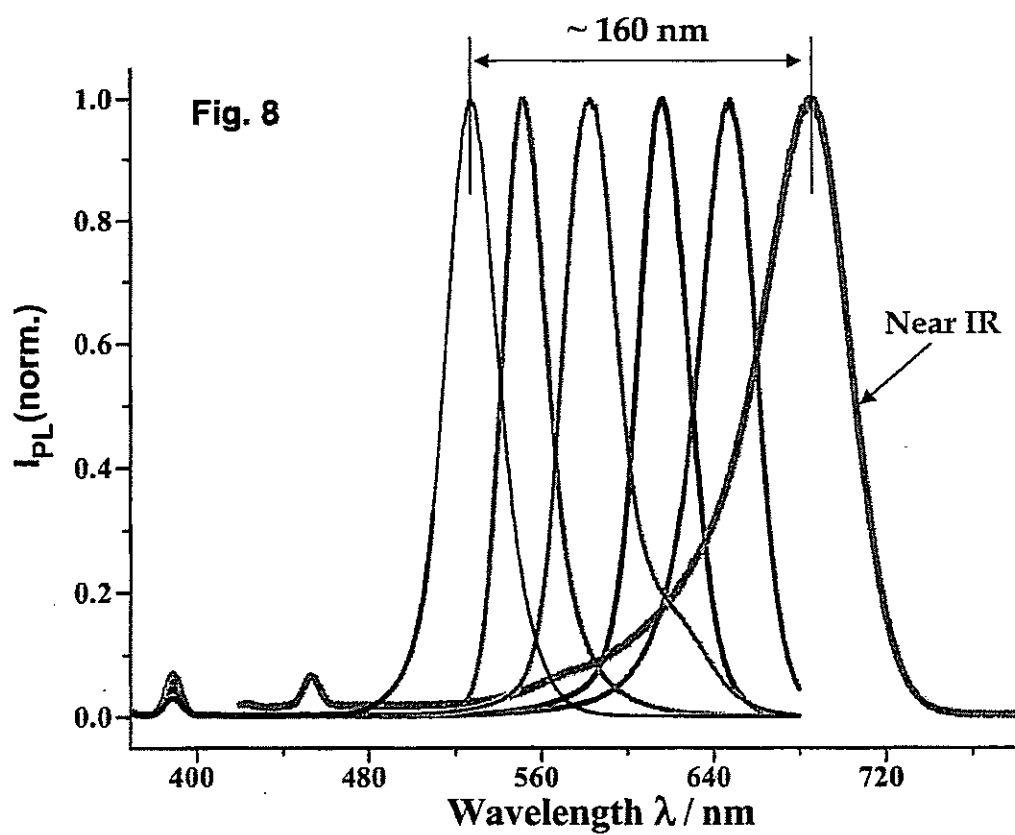
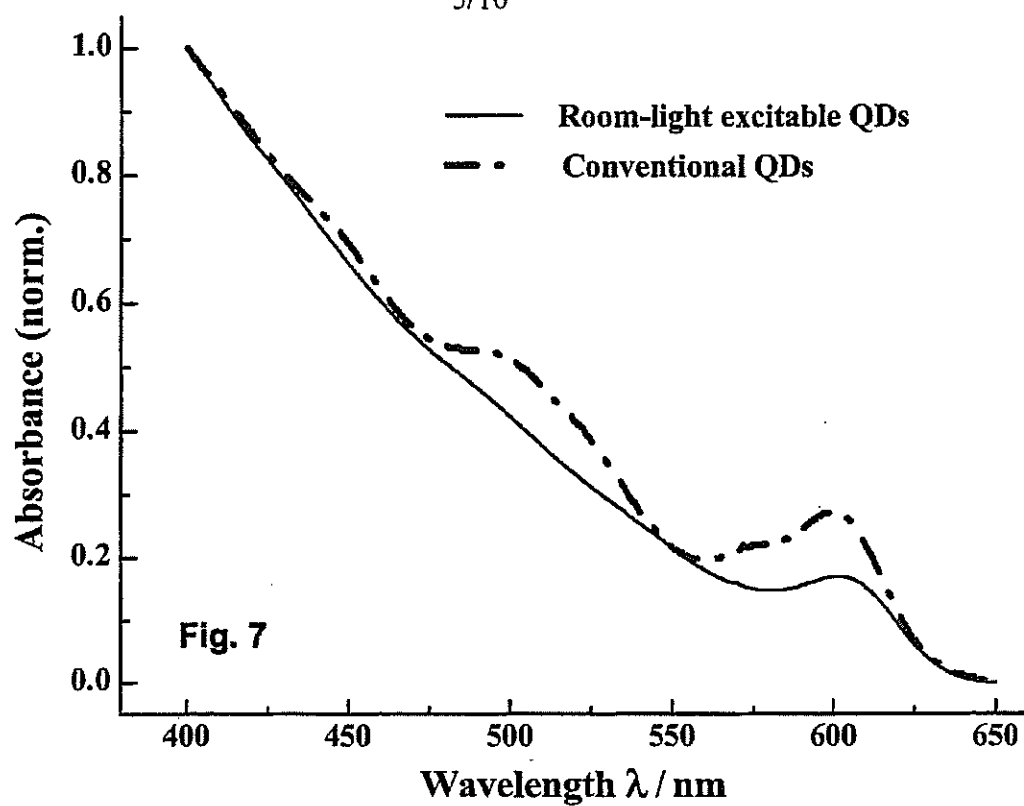
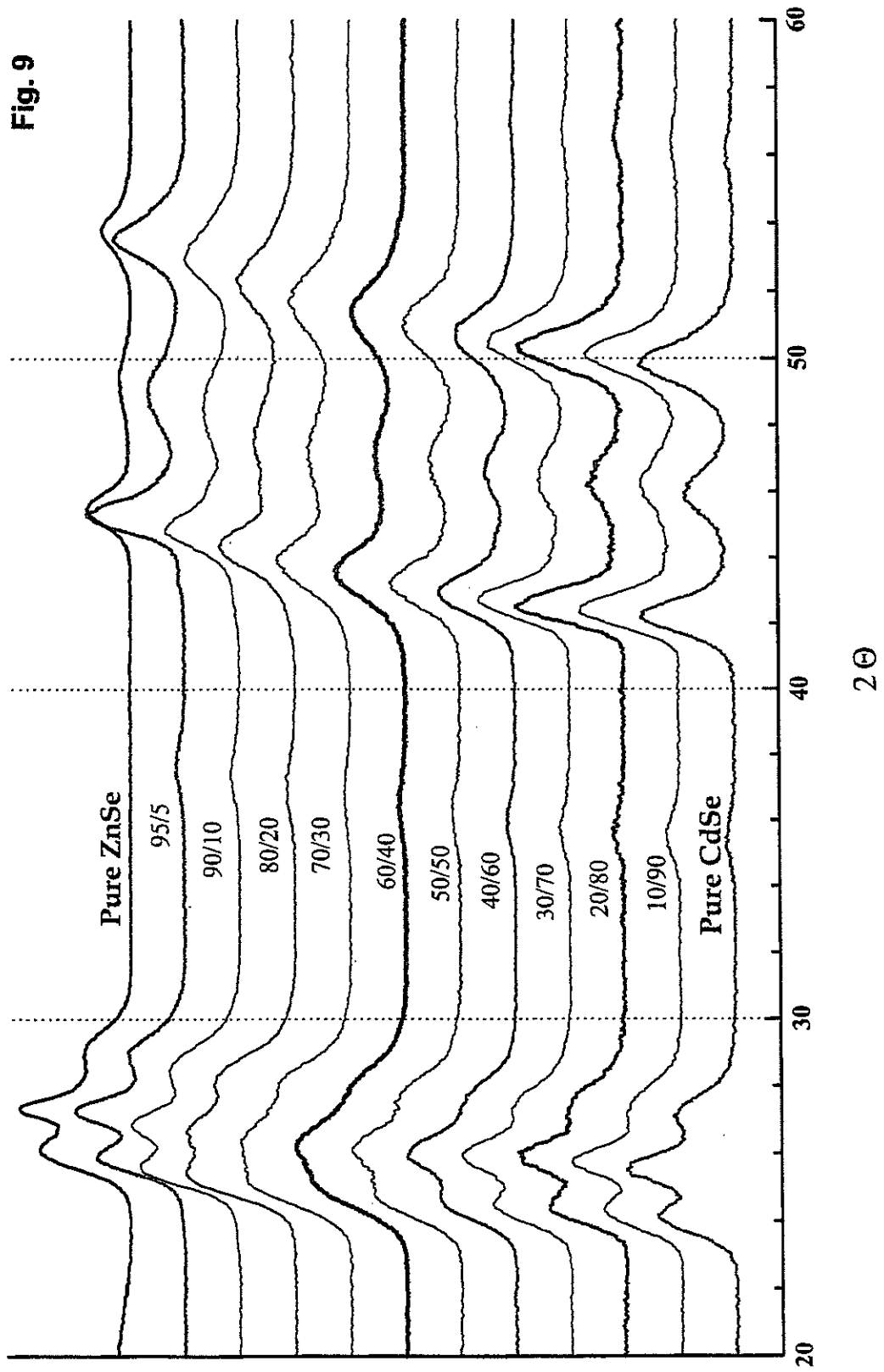


Fig. 6 Room-Light Excitable QDs

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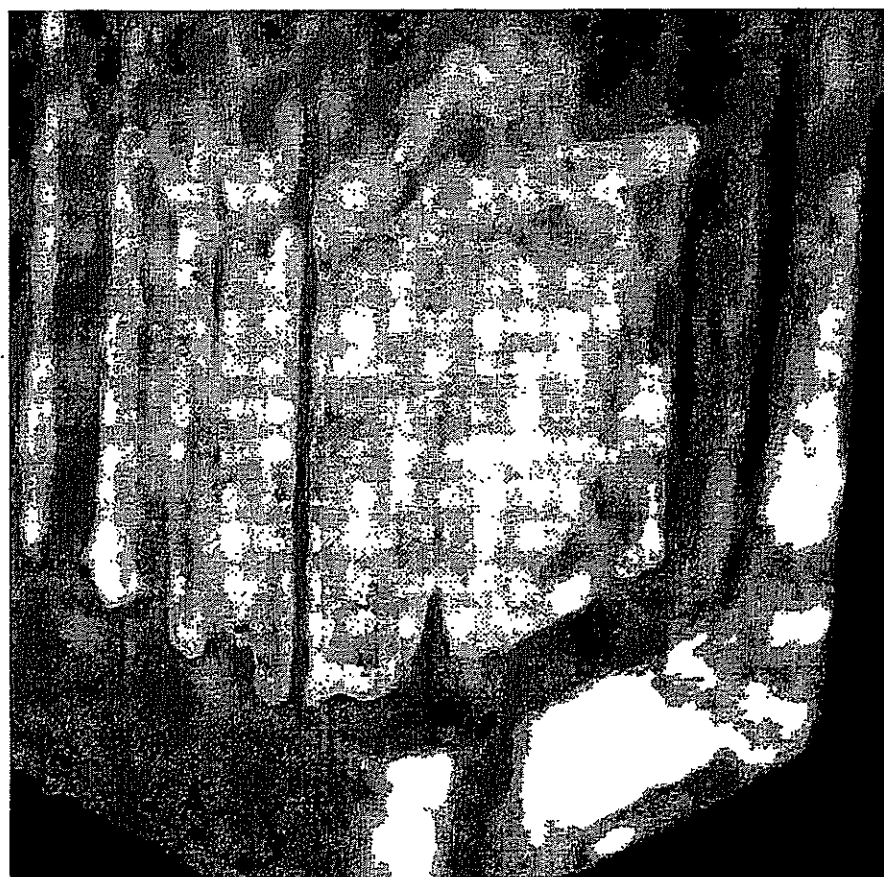
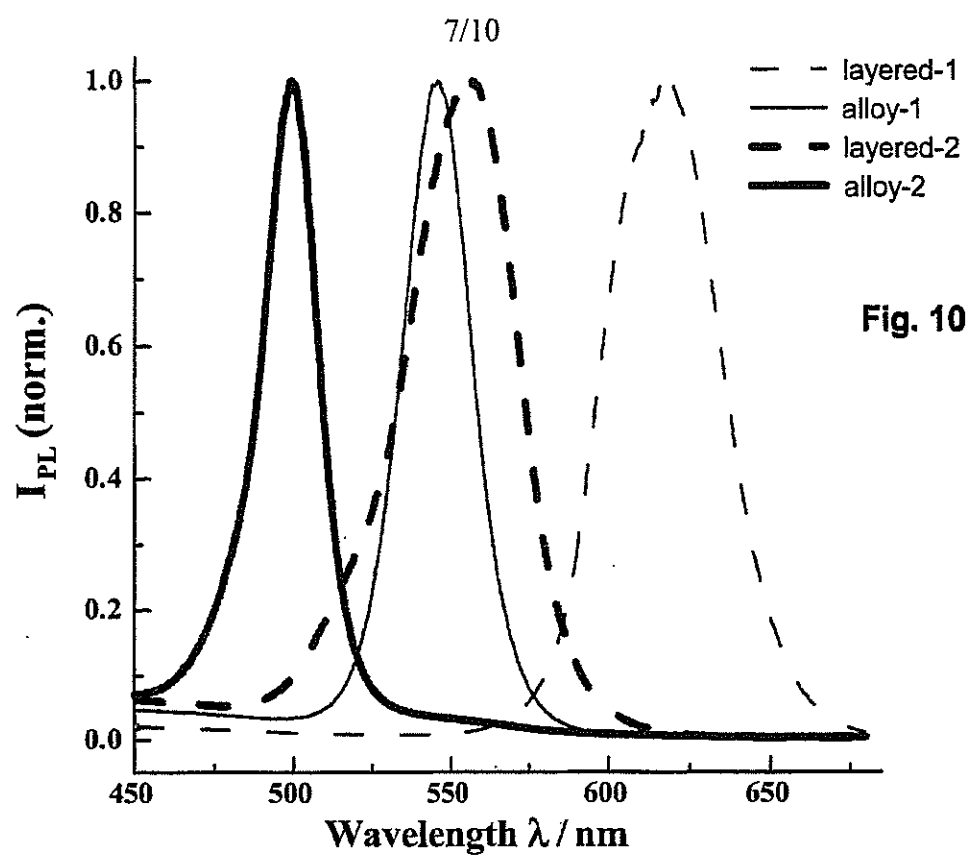


Fig. 11

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Fig. 12A

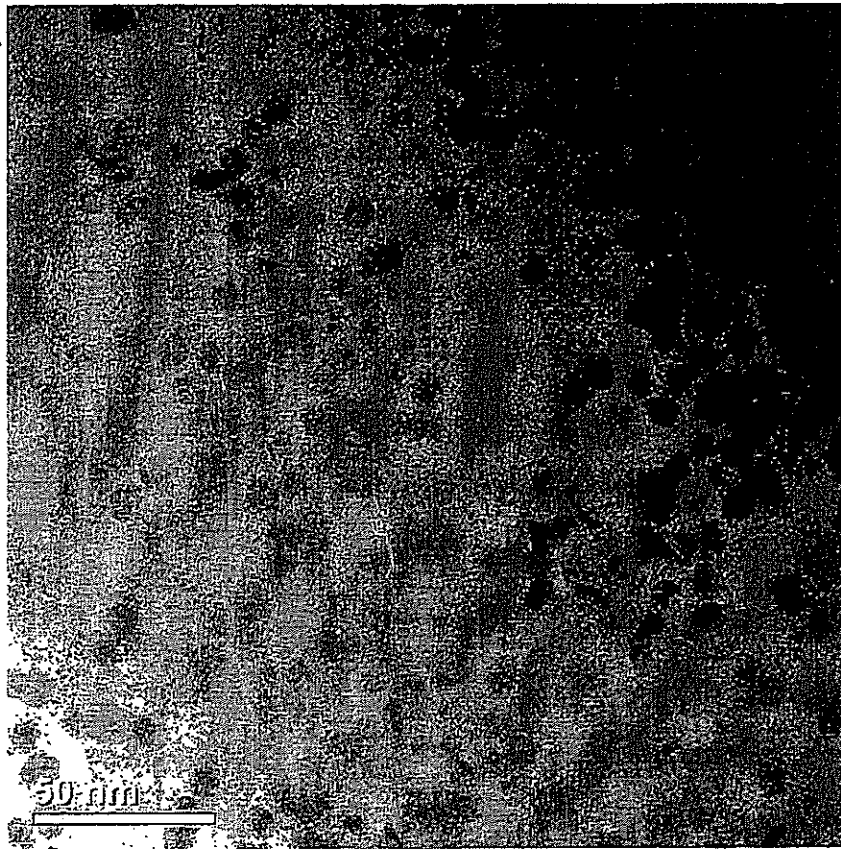
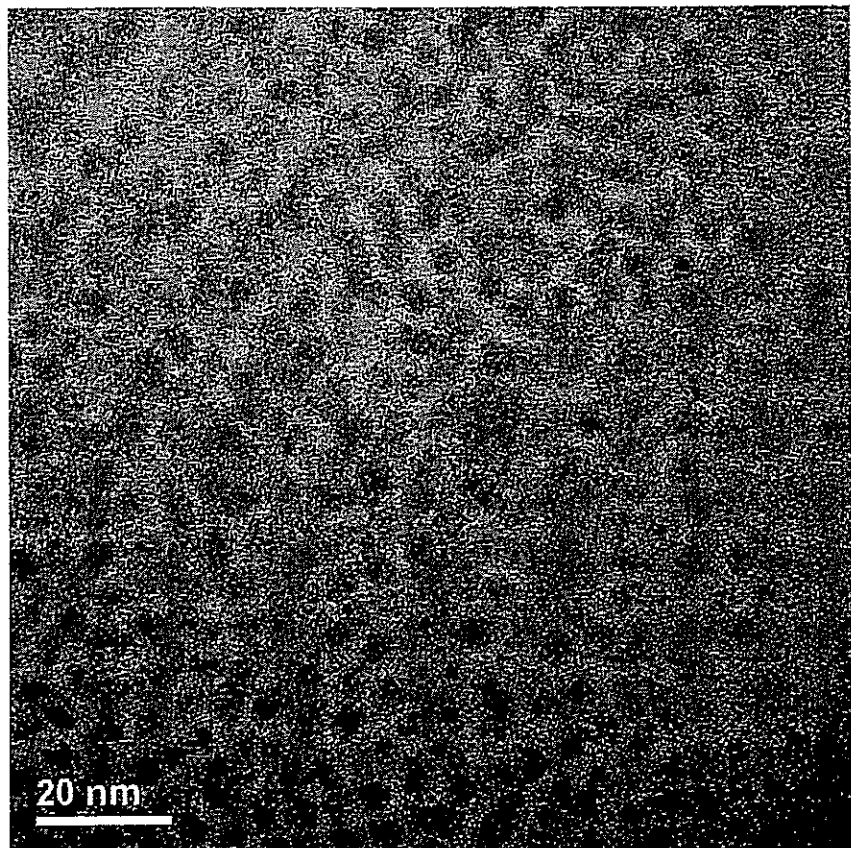


Fig. 12B



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Fig. 13A

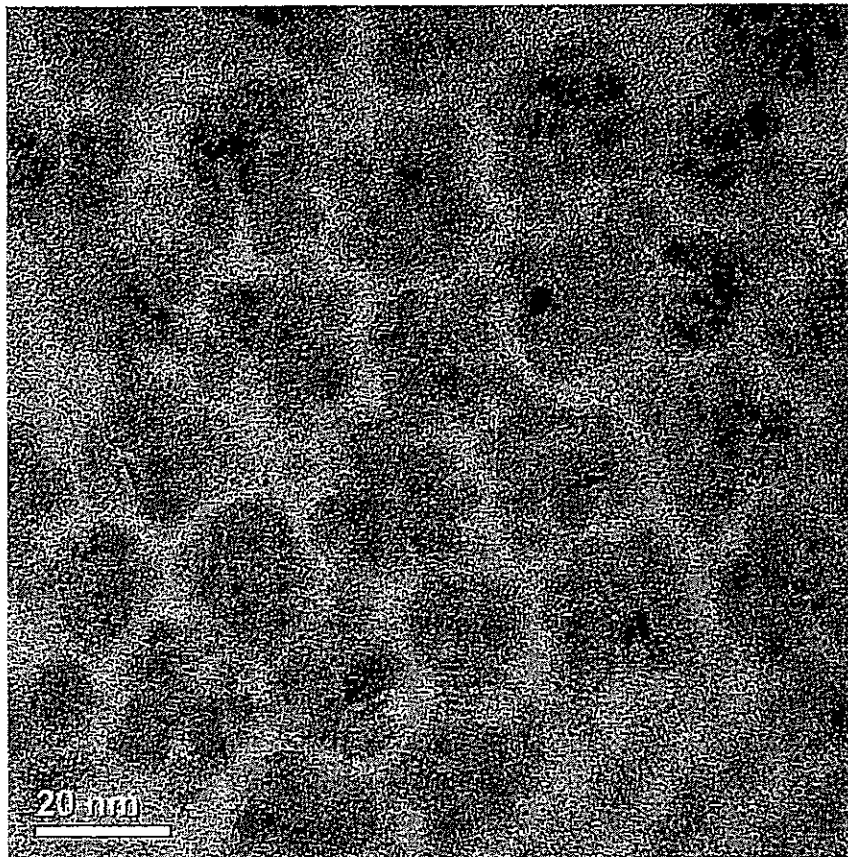
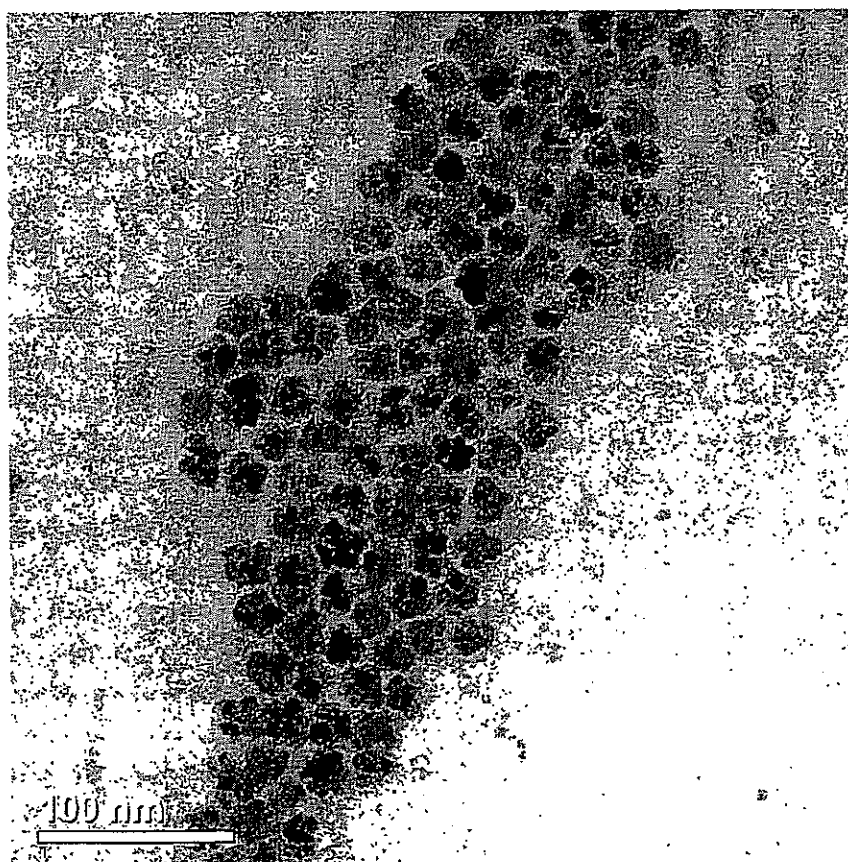
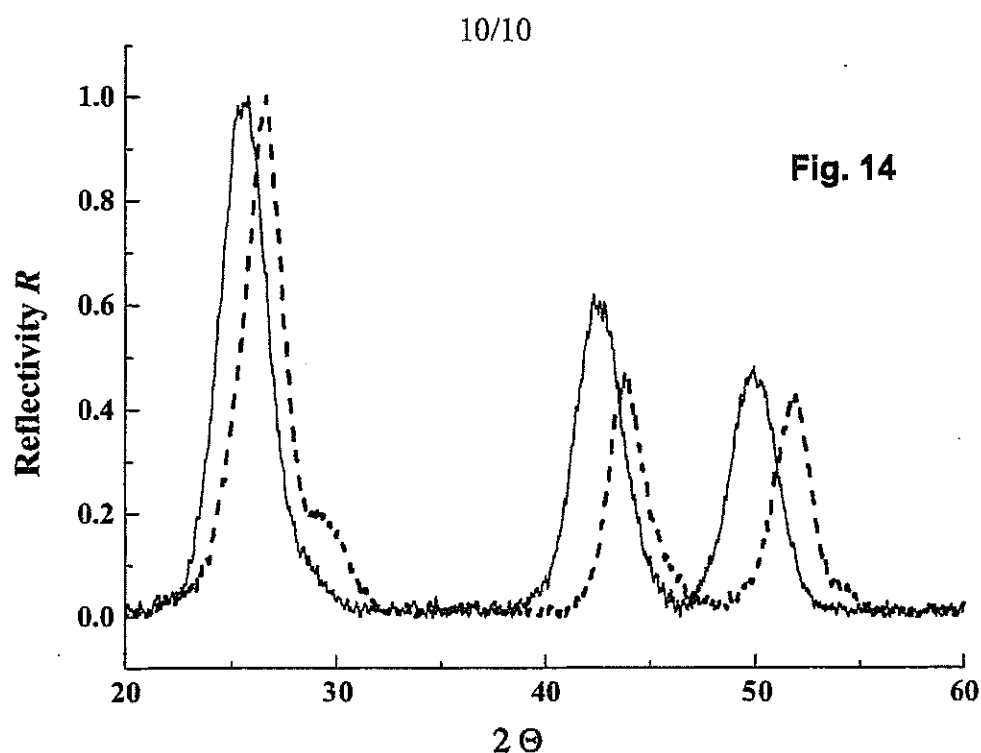


Fig. 13B



**Table 1**

Comparison between conventional method and method of the invention for the preparation of core-shell type quantum dots

	Conventional method	invention
Materials	Toxic, dangerous, and expensive Diethyl Zinc included	ZnO is the zinc-providing material, cheap and safe
Operation steps	2	1
Operation complexity	Successive Ion Layer Adsorption and Reaction, exhausting and requiring precise control over injection volume	One-injection
Principle	Manual control	Automatic control by reaction dynamics
Lattice mismatch (product)	yes	small
Fluorescence (product)	high	Room-light excitable (excellent)
Preparation Cost	high	low
Mass production	No	Yes