

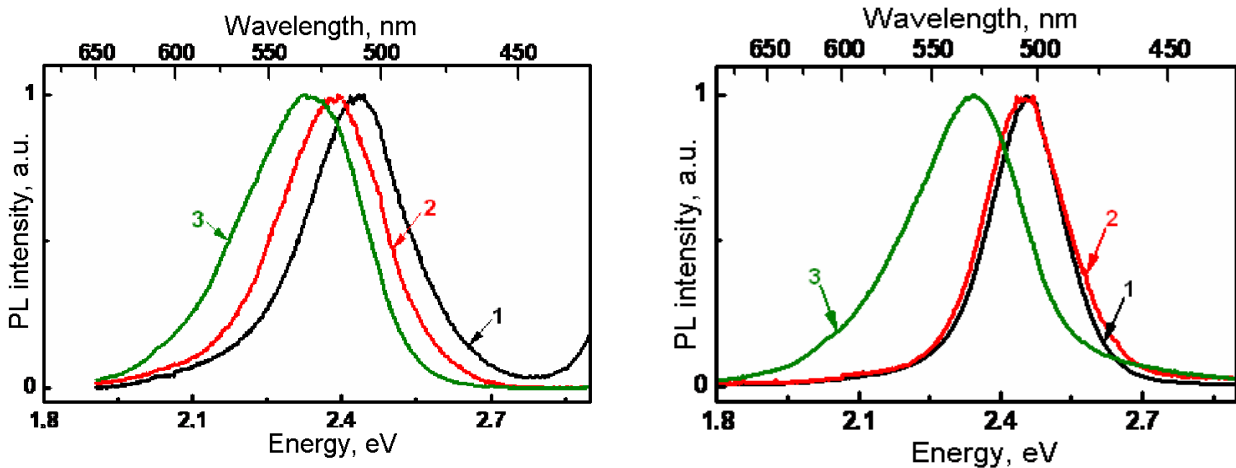
## Lectures, presentations etc. (Only for subscribers)

The journal SPQEO goes on the rubric “Lectures, Presentations etc.” to disseminate information about fundamentals of sciences close to SPQEO directions and areas. The lectures could be both interesting and useful for scientists, PhD students and other persons with an inquiring nature, who are working or studying not only in the area of semiconductor physics, but in solid state physics, chemistry, biology, and informatics, too.

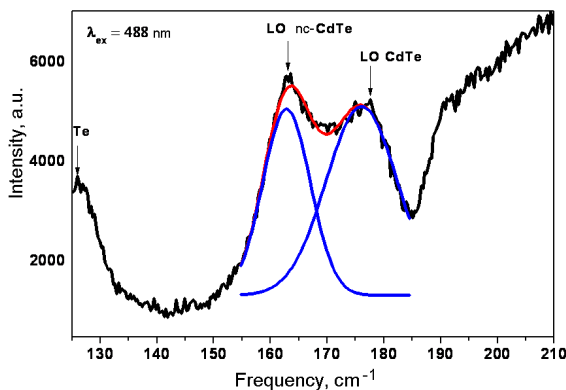
### “Conversion semiconductor LED” by Dr. Olga A. Kapush

Here you can find the following:

- equipment scheme for fabrication of nanoscale structures on the base of  $A^{II}Te$  and  $A^{IV}Te$  type compounds;
- granulometric composition of colloidal solutions of nc-CdTe;
- adhesion in the system CdTe/dispersion medium;
- physical basics of electrokinetic phenomena, electric double layer;
- photon correlation spectroscopy;
- quantum-sized effect of electrons in a potential well;
- PL spectra of nc-CdTe in colloidal solutions;
- PL spectra of CdTe nanopowders;
- PL spectra of colloidal solutions and film structures based on nc-CdTe, stabilized by THC and gelatin;
- Raman scattering spectrum of colloidal nc-CdTe/THC solution;
- characteristics of conversion LEDs.



**Fig. 1.** PL spectra of colloid solutions of nc-CdTe: a) ethylene glycol, 1 – 10%, 2 – 25%, 3 – 50%; b) glycerin, 1 – 5%, 2 – 10%, 3 – 25%.



**Fig. 2.** Raman scattering spectrum of colloidal nc-CdTe/THC solution.



**Fig. 3.** Conversion semiconductor LED based on nc-CdTe.