

## Welcome to the NTSE Newsletter, Issue December 31<sup>st</sup>, 2012

You are reading the latest issue of the <http://www.ntse-nanotech.eu/newsletter>, presenting you the latest information and progresses about “NTSE-Nano Tech Science Education” Project.

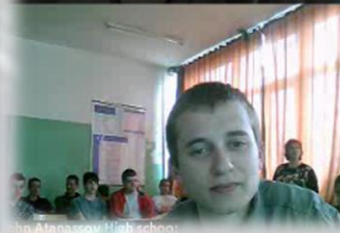


NTSE Nanotech Science Education project is a KA3 Transversal Multilateral Project aiming to raise the awareness of nanotechnology and the use of nanotechnology in students, teachers and prospective teachers through science education using ICT tools.

Nano-Tech Science Education (NTSE) creates a new direction in Science teaching by means of ICT through making science education more attractive to students (13-18) and teachers, more current and applicable for prospective science teachers of all backgrounds.

Following the need analysis, implementations with students and workshops with teachers, five lesson plans in several Nanotechnology topics for the Virtual Lab are designed to improve the scientific judgment of the students via inquiry based learning concept.

- On 17 March 2011, a local workshop for 7<sup>th</sup> and 11<sup>th</sup> grade students from Doğa Schools were organized in Yakacık Nanobiotech Laboratory-Turkey.
- A local workshop for science teachers of Doğa Schools were organized in Yakacık Bionanotech Laboratory-Turkey between 6-8 September 2011.
- 1<sup>st</sup> on-line video conference was held between Çekirge Doğa High School (TR) and John Atanasov High School (Sofia-BG) in 12 December 2011.
- 2<sup>nd</sup> on-line video conference was held between Çekirge Doğa High School, Acarkent Doğa School (TR) and John Atanasov High School (Sofia-BG) in 14 May 2012.
- In May 2012, implementations of Nanocrystals Experiment were conducted in 9 different Doğa Schools and videos of the implementation were uploaded in the Podcasting Room of the Virtual Lab.
- In September 2012, implementations of Nanocrystals Experiment were conducted in 10 different Doğa Schools.



Video  
conference

Experiments room



Understanding Nanoscale

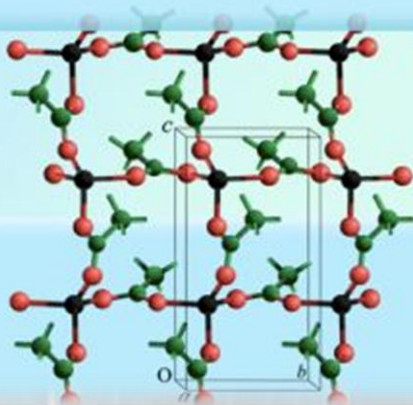
We do not see objects or measure distances in the nanoscale in our daily life. Comprehension of the nanoscale is very very small scale, only possible with fun examples assembling nanoscale.



Making Origami Buckyball

A buckyball is a molecule containing 60 carbon atoms. Each carbon atom is bonded to three adjacent carbon atoms, and the entire grouping forms a sphere. This unique molecular shape and composition is useful in many of applications.

While dissolving in water, the cubic crystal structure decomposes. Click on the structure to decompose the crystal!



The Virtual Lab (<http://vlab.ntse-nanotech.eu>) is intended to make the science education more appealing and motivating via the design of materials supporting science teachers in general in addition to vocational education. The Virtual Lab Containing Experiments Room, Podcasting Room, The Blog, The Repository, The Glossary and The Competitor Room is a guideline for students, teachers and prospective teachers about learning the basic concepts of Nanotechnology integrated in science education.

Experiment Room in the Virtual Laboratory is formed of lesson plans guiding students, teachers and prospective teachers to take a step into the interesting World of Nanotechnology via reading texts, simulations and experiment videos. Teachers and prospective teachers are cordially invited to use the EXPERIMENT ROOM, test the lesson plans and join the video conference sessions. In the Podcasting Room, visitors are able to watch the videos of the implementations of lesson plans in different schools and gain the experience to implement on their own.

**UPCOMING EVENTS: NTSE POSTER COMPETITION 2012-2013**

A Nano Poster Competition is proposed for students. Students between 14-18 age are supposed to select a topic in nanotechnology about current and possible future applications and prepare a poster with their team.

The winners of the Nano Poster Competition will be invited to participate in the Nano-Camp which will be in Bulgaria in July 2013.

<http://vlab.ntse-nanotech.eu/NanoVirtualLab/competition/front/submit>

**NTSE POSTER COMPETITION 2012-2013**

You can be invited to the **NANOSCIENCE CAMP in Bulgaria**

**ONLY FOUR STEPS AWAY**

- ★ Form your team with up to two friends
- ★ Prepare a poster about the Nanotechnology in our life today and share your ideas about what is going to happen in the future
- ★ Upload your poster to our web site, invite your friends and their friends to vote your poster to be a finalist in AFPMRS 2013 Congress
- ★ Impress the science committee in AFPMRS 2013 with your poster and win the prize: Zippee, Nano Science Camp!

Submission Deadline: 15 March 2013

[vlab.ntse-nanotech.eu](http://vlab.ntse-nanotech.eu)

Doğa Schools, Turkey <a href="http://www.dogaschools.com">www.dogaschools.com</a> 	Universitatea Valahia Din Targoviște(UVT), Romania <a href="http://www.valahia.ro">www.valahia.ro</a> 	Center for Creative Training (CCTA), Bulgaria <a href="http://www.cct.bg">www.cct.bg</a> 	Sirma Media, Bulgaria <a href="http://www.sirmamedia.com">www.sirmamedia.com</a> 	Foundation for Research and Technology (FORTH), Greece <a href="http://www.forth.gr">www.forth.gr</a> 	Fondazione Idis-Citta della Scienza, Italy <a href="http://www.cittadellascienza.it">www.cittadellascienza.it</a> 
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