

NanoMaterials: Science and Applications in Utrecht, the Netherlands



If you want to

- **Widen and deepen your knowledge of Nanomaterials Science**
- **Learn how to make, measure and model nanomaterials**
- **Be inspired by novel applications**
- **Get introduced to laboratory skills in nanomaterials research**
- **Visit an industrial R&D laboratory**
- **Present the nanomaterials topic of your choice to an international audience**
- **Have fun with fellow students from all over the world**

Then here is your opportunity!

For whom?

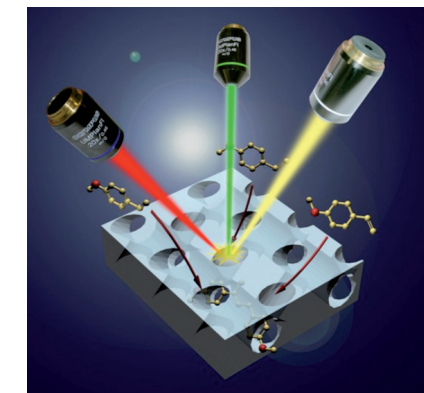
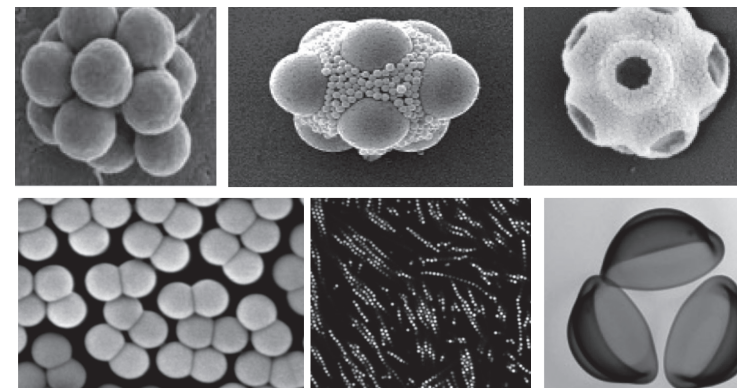
Advanced bachelors with a background in chemistry, physics or materials science as well as proficiency in English. Applicants will go through a selection procedure.

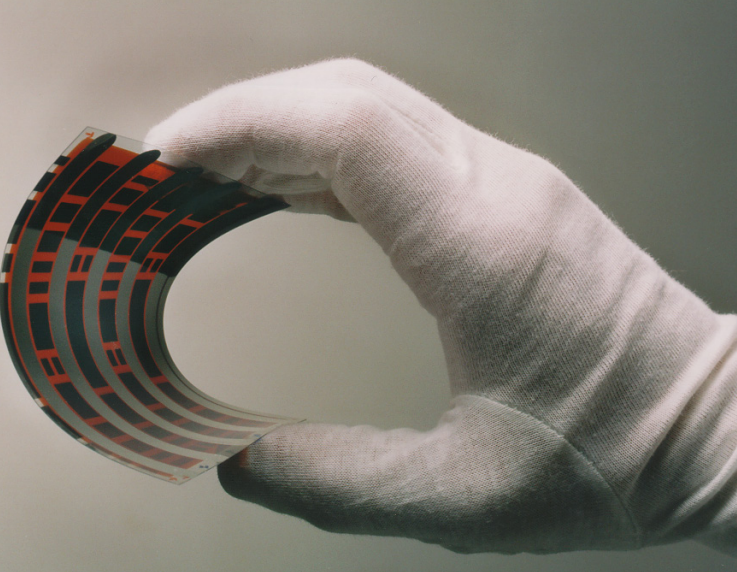
What to expect?

You will experience an intensive two-week program on Nanomaterials Science and Applications that will combine theory (lectures, tutorials) with experiment, laboratory tours and a visit to an industrial research laboratory. The school ends with a Minisymposium in which you present a topic on modern nanomaterials research. In addition there is an extensive social program, spanning the entire two-week period.

Background

The fields of nanoscience and nanotechnology depend on materials with critical dimensions in the nanometre range. Examples include organic macromolecules, inorganic catalyst particles, and size-quantized metal and semiconductor structures. The properties of these materials depend on the size and shape of the nanoparticles and their ordering in 2-D and 3-D structures. Nanomaterials find and promise applications in a wide range of fields such as device technology (nanophotonics, solar energy conversion, opto-electronics), medicine (sensors, labelling) and chemical synthesis (catalysis). The course will introduce you to the exciting interdisciplinary field of nanoscience, its chemical and physical aspects, and its many applications.





www.uu.nl/science/summerschools

About Utrecht University

Utrecht University is firmly founded on tradition. The university, which in 2011 will celebrate its 375th anniversary, has developed into one of Europe's leading research universities. The university is the largest in the Netherlands, is ranked among the best in Europe, and offers an inspiring academic environment in which highly committed staff share their knowledge with curious and ambitious students. Its 89 international degree programs are not only characterized by their wide topical range, but also by their strong interdisciplinary nature.

Program

August 2011	Topic
Monday, 15th	Registration, Coffee Opening and Welcome General Introduction to 'Nanomaterials: Science and Applications' Quantum Dot Structures Welcome Drinks
Tuesday, 16th	Colloid Science
Wednesday, 17th	Catalysis: Chemistry at the Interface of Nanoparticles
Thursday, 18th	Nanomaterials for Solar Cells
Friday, 19th	Excursion to Philips Research Labs, Eindhoven (unconfirmed)
Weekend, 20/21st	Leisure, Social Program, Outing
Monday, 22nd	X-Ray and Electron Spectro-Microscopy of Nanomaterials Optical Microscopy of Single Nanoparticles
Tuesday, 23rd	Organic Molecules, Macromolecules and Assemblies Photon Physics: Laser Cooling and Ultrafast Nanoacoustics
Wednesday, 24th	Topics in NanoScience
Thursday, 25th	Preparation for Mini-Symposium
Friday, 26th	Mini-Symposium & Wrap-up Farewell Lunch

About the City of Utrecht

Utrecht is more than 1300 years old, and may rightly be called the "Heart of the Netherlands" for its central position in the country. The City of Utrecht is an interesting place to visit. Its canals and wharves form a unique attraction, with many quayside paths that can be negotiated on foot. Lively restaurants and boutiques occupy many of the cellars along the canals. Utrecht boasts the tallest and finest church tower in Holland: the Dom, a landmark over 600 years old and 112 meter high that can be climbed in 465 steps. Mediaeval churches dot the city, and there many interesting museums, shops, galleries to discover. English is a second language to the Dutch and is spoken in nearly all public places. Utrecht is known for its compactness, and almost everything of interest can be explored on foot or bike. There are excellent train connections with other famous historical towns, such as Amsterdam, The Hague, Leiden and Delft.



USNM 2011

summerschool
UTRECHT

NanoMaterials: Science and Applications



15-26 August 2011

COURSE LEADERS: Dr. Celso de Mello-Donega,

Dr. Marcel Di Vece, Dr. Pieter Bruijninx

LANGUAGE: English

PERIOD: Monday 15 - Friday 26 August 2011

CREDITS: 3 ECTS

FEE: € 890 (Course + course materials + housing + deposit)

SCHOLARSHIPS: limited number of grants (fee and/or accommodation)

HOUSING: Rooms in student houses with shared facilities

Application

www.utrechtsummerschool.nl

DEADLINE: May 15, 2011

For information on our MSc program

in Nanomaterials: Chemistry and Physics

and the application procedure

please visit www.uu.nl/internationalstudents.

www.uu.nl/science/summerschools

[Faculty of Science]

Universiteit Utrecht

