

## Press release

### attocube Research Award 2013

**On July, 19 this year's „attocube Research Awards“ were given to four CeNS (Center for Nano Science) Master students and PhD scientists at the Ludwigs-Maximilians-Universität in Munich. They and their supervising groups had been honored for their excellent Master's theses and PhD dissertations in the field of application-related nanosciences. The Award is endowed with 17,500 € and is given yearly since 2009. Company founder and Scientific Director Prof. Khaled Karraï rewarded the students for their exceptional performance.**

While most scientific prizes celebrate achievements in fundamental research, the attocube Research Award decidedly attaches importance to the potential industrial applicability from such achievements. It promotes lateral thinking and unites scientific approaches with potential market orientation. attocube established the award in 2009 as the required conditions are closely linked to its own roots: The initial impulse for the company and its present success story was born out of a “byproduct” of the quest to understand fundamental interactions between light and matter. This “byproduct” was the invention and development of innovative piezo-based nano-positioners and nano-position sensors which have revolutionized the worldwide scientific market and led to a prosperous growth of the company. The ability to identify chances and market potentials and to make the entrepreneurial step to turn them into reality is one of the pillars of attocube's success still today. Karraï gave the prize to the awardees stating: „It is essential for attocube to promote the interdisciplinary exchange between science and industry, thus opening up new potentials which will create opportunities we can't even detect today. The attocube Research Award rewards young scientists opening up their minds to application-oriented approaches and facilitating the exchange of different disciplines.“

July 29, 2013



f.l.: Prof. Thomas Bein, Prof. Eva Weig, Dr. Thomas Faust, Prof. Jörg Kotthaus, Friederike Möller, Prof. Philip Tinnefeld, Eva-Maria Roller, Prof. Tim Liedt, Prof. Khaled Karraï.

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Further information on the awardees and their works:

#### Category Master's thesis:

**Eva-Maria Roller** (group Prof. Tim Liedl): Her thesis focusses on the development of a new concept to produce DNA-based "metamaterials". Such novel materials have unusual optical properties that can be finely tailored. The potential here is in optical information processing.

Get more info here: <http://bit.ly/attoResearchAwardI>

**Friederike Möller** (group Prof. Philip Tinnefeld) received the Award for her work on DNA Origami, designed to build nano electromagnetic antenna that amplify about more than 100 times the intensity emission of fluorescent molecules. The potential for this work is in medical diagnostics and DNA sequencing.

Get more info here (German version only): <http://bit.ly/attoResearchAwardII>

Their works are published in the renowned „Science“ and „Nature“ magazines.

#### Category Dissertation:

**Dr. Johann Feckl** (group Prof. Thomas Bein) worked on novel nanostructures made of nanocrystal of Lithium-Titanate crystals that makes it possible to store electrical energy in a way that charging speed and charging stability are enormously enhanced. This novel system will fill the gap between conventional batteries and supercapacitors.

Get more info here: <http://bit.ly/attoResearchAwardIII>

**Dr. Thomas Faust** (group Prof. Jörg Kotthaus & Prof. Eva Weig) developed a novel compact plug & play sensor architecture out of nano mechanical strings that integrates the sensors and their microwave readout, making them much easier to use than ever. These sensors are very sensitive to environmental changes possibly down to the single molecule detection.

Get more info here: <http://bit.ly/attoResearchAwardIV>

Also their works are published in well-known magazines such as "Angewandte Chemie International Edition" and "Nature Physics".

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