

Saturday , June 21: “Science at the Market: 8:00 am to 12:00 pm / Market at the Square, Lincoln Square, Urbana, IL

Monday, June 26: REU Lunch Talk: “QCD at a few Trillion Degrees”
Anne Sickles

Tuesday, June 27: REU Lunch Talk: “DNA Nanotechnology” Alek
Aksimentiev

Saturday , June 30: “Science at the Market: 8:00 am to 12:00 pm / Market at the Square, Lincoln Square, Urbana, IL

Science at the Market: The University of Illinois Department of Astronomy

Date: Saturday, June 24

Time/Location: 8:00 am to 12:00 pm / Market at the Square, Lincoln Square, Urbana, IL

Abstract: For the 8th year, the U of I is bringing "Science at the Market" on most Saturday mornings to the Farmers Market at Lincoln Square mall in Urbana. The U of I and other experts will be on hand with demonstrations illustrating the science they represent, and to answer questions from the public about the researchers' discipline.

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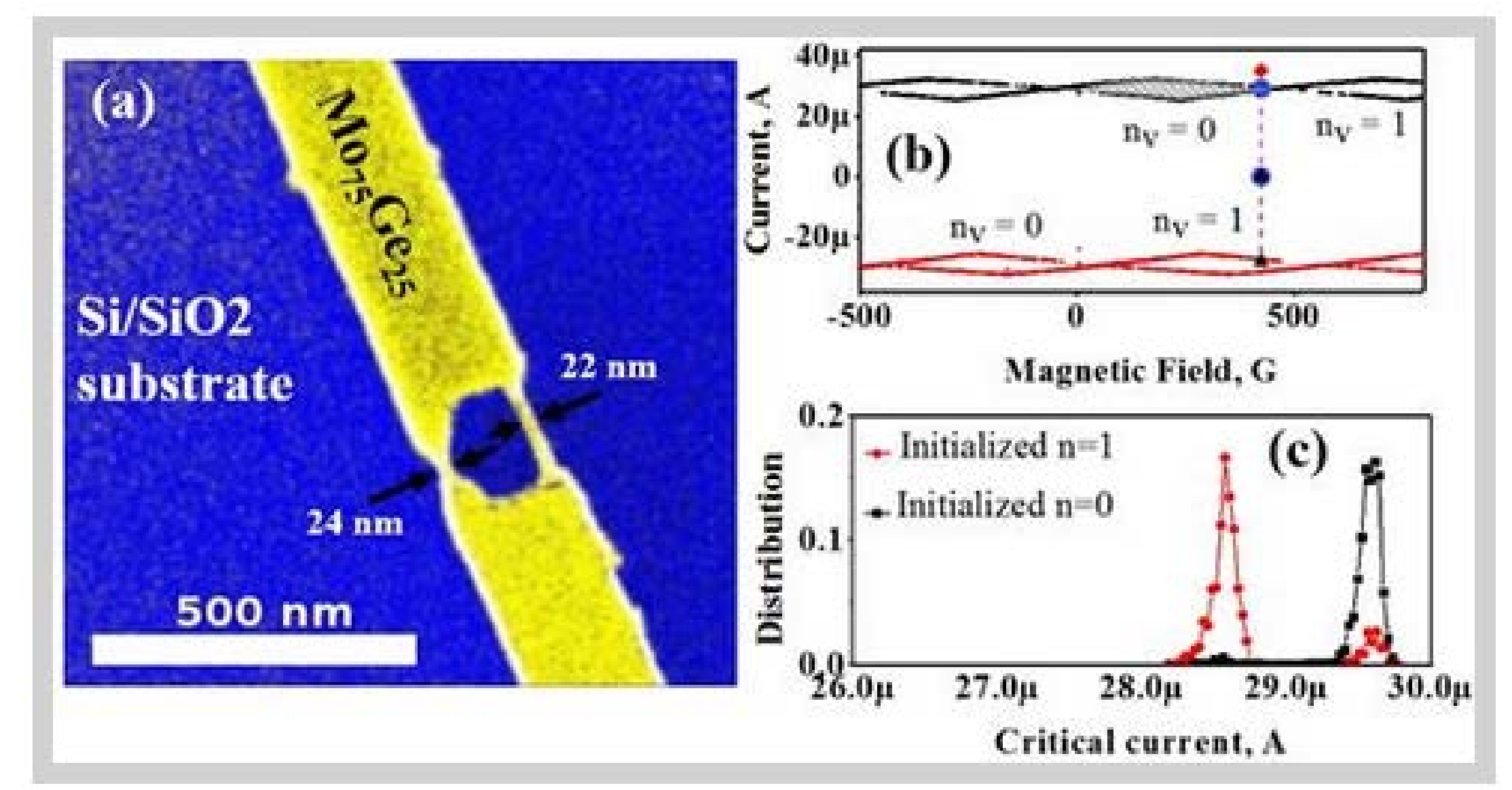
Visitors: Xiao-Tian Zhang, Peking University, China (Hughes) 3133 ESB May – October 2017

New Publication

Nanoscale superconducting memory based on the kinetic inductance of asymmetric nanowire loops

Authors: **Andrew Murphy, Alexey Bezradin, and Dmitri Averin**

The results are published in the June 13, 2017 *New Journal of Physics* (v.19, p.063015). DOI: [10.1088/1367-2630/aa7331](https://doi.org/10.1088/1367-2630/aa7331)



Superconducting nanoscale memory cell. Binary information is encoded in the direction of the electrical current in the loop. Clockwise indicates '0', counter clockwise, '1'. The superconducting electrons flow indefinitely, so memory is nonvolatile. (a) Photo of device: A superconducting strip of Mo₇₅Ge₂₅ (yellow) with a pair of superconducting nanowires forming a closed loop (also yellow). (b) The critical current (maximum current that can be injected without destroying superconductivity) plotted as a function of magnetic field: To set the memory state '0', a positive current is applied, targeting the shaded diamond. To set the memory to '1', a negative current is applied. To read out the state, the current is ramped, as shown by the red rhombus, and the current value at which voltage occurs is measured. This measured value, the critical current, depends on the pre-set memory; its statistical distribution is shown in (c). Images by Bezryadin and Murphey, U. of I. at Urbana-Champaign

CALENDAR OF EVENTS <http://physics.illinois.edu/bluesheet.asp>

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Job Opportunity

The Faculty of Physics of the Ludwig-Maximilians-University Munich invites applications for a Professorship (W2) (6 years/tenure track) of Experimental Physics – Solid-State Quantum Nanosystems.

The desired research field involves the design, measurement and control of solid-state-based quantum nanosystems using optical and transport techniques.

For details, see:

<https://www.nature.com/naturejobs/science/jobs/616391-professorship-w2-6-years-tenure-track-of-experimental-physics-solid-state-quantum-nanosystems>

https://www.academics.de/jobs/professur_w2_fuer_experimentalphysik_-_festkoerper_quanten-nanosysteme_142230.html

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All-inclusive slots for PhD students and (early stage) Postdocs to participate in the International Summer School /MATERIALS 4.0: The digitally enabled atom to system revolution/ which will take place at TU Dresden this year (September 11- 15, 2017).

Innovative materials are a key element for keeping products and industrial processes economically competitive and ecologically sustainable. Modern materials science requires a multi-discipline approach embracing chemistry, physics, engineering, as well as theoretical and numerical modelling. The summer school/MATERIALS 4.0/ will provide an overview of current developments in the ongoing digitalization revolution in materials science and will offer a platform for discussions about future perspectives. Dresden is a cultural capital and a world-leading center for materials research. During the one-week school, 12 renowned researchers will lecture and tutor the small group of students.

The registration is open until July 4th. For excellent PhD students and Postdocs, up to 20 all-inclusive grants (travel support, accommodation, participation) will be available.

For further information and the tentative list of speakers please refer to the Summer School homepage: <http://dcms.tu-dresden.de/materials40/>

and the Summer School flyer and poster:

http://dcms.tu-dresden.de/wp-content/uploads/2017/06/MATERIALS40_Flyer.pdf

http://dcms.tu-dresden.de/wp-content/uploads/2017/06/MATERIALS40_Announcement.pdf