John Nance

B.S. Physics - Graduated University of North Carolina – Chapel Hill

<u>Project</u>: Investigation into the Effects of Quantum Structures on the Carrier Dynamics of GaAs/GaNAs Solar Cells

Fabrication and Characterization

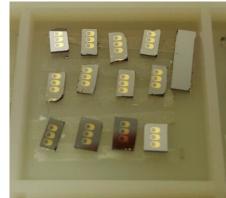


--- GaAs SC

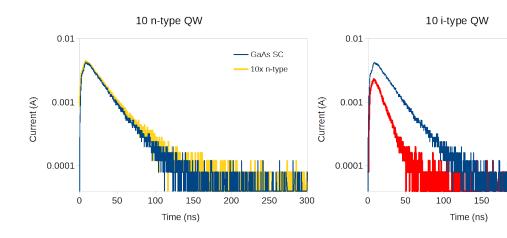
200

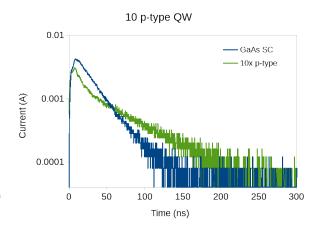
■ 10x i-type

250



Time-resolved Photocurrent











Observation

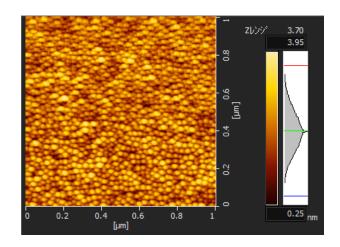
Communication was especially important.

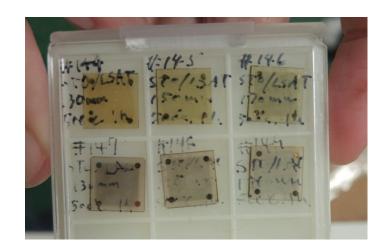
- Language Barrier
- Polite

Skye Tackkett

Physics—Senior Missouri University of Science and Technology

- Growth parameter control of structures and properties of SrTiO₃ (STO) thin films
- Sputtered films and characterized roughness, crystallinity, composition and electrical properties





Japan: Life at NIMS

- NIMS National Institute for Materials Science
- Three sites: Sengen, Namiki, Sakura
- Many buildings at each site, a lot of going around between them
- ID cards
- Lab groups eating together, tea parties, etc.



An Observation

- In speaking with a student from the Toyota Technical Institute
 - He complained about not having anyone to talk about his research with, as in other people researching the same topic as he was
 - I'm used to talking about my research with anything that moves, even if that means I have to explain a lot of things along the way
 - In addition, the main group I was a part of was very large, but the only time we would interact with each other was often only at office tea parties

Maya Martirossyan

Physics Graduate Harvey Mudd College



Research with Prof. Takao Mori working on growing thin film YbBx for thermoelectric applications

Tokyo



Cooper Thome

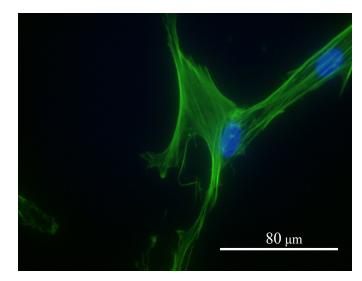
Chemical Engineering – Senior University of Tennessee at Chattanooga

Project: Manipulation of cell spreading and cytoskeleton of stem cells by micropatterned surfaces

Mesenchymal stem cells (MSCs)

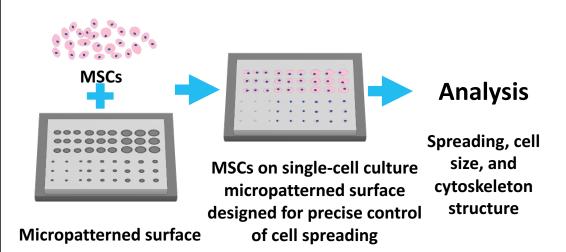
Undifferentiated cells with ability for long-term self-renewal and differentiation into various cell types (stemness)

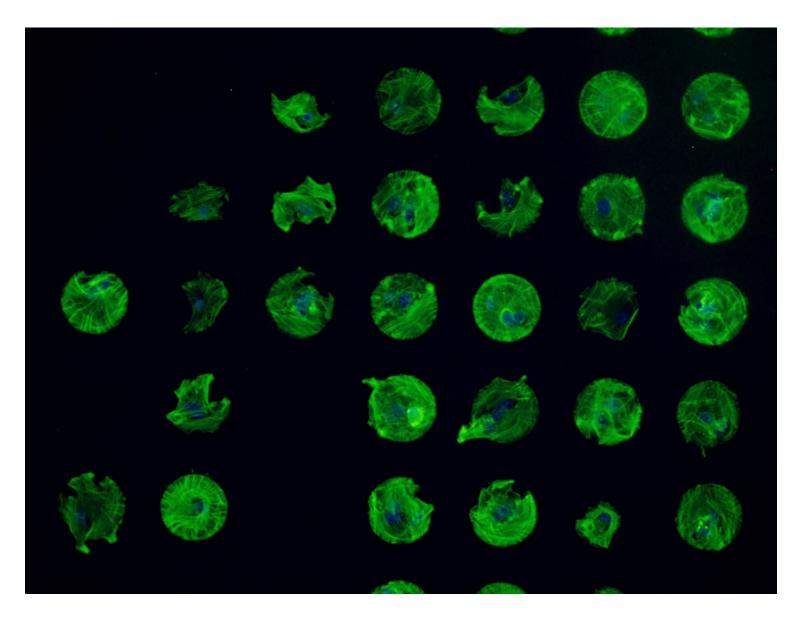
Behavior, such as differentiation, can be affected by microenvironment



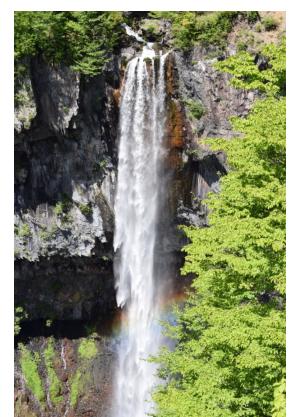
MSC cultured on standard polystyrene substrate

Actin in green
Nucleus in blue

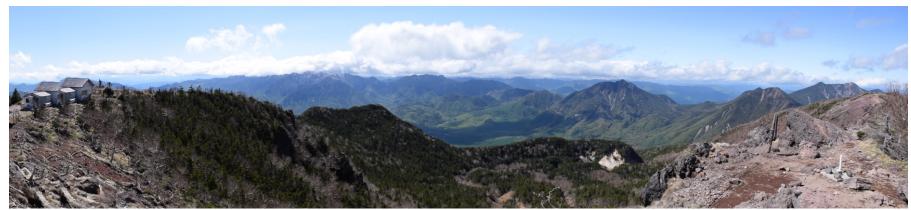




Outdoors in Japan







Kegon Falls, Lake Chuzenji, and Mt. Nantai in Nikko, Tochigi Prefecture.



Mountain biking at Fujimi Panorama Ski Resort, Nagano Prefecture



Angry monkey in Nikko, Tochigi Prefecture



Sunrise on Mount Tsukuba, Ibaraki Prefecture



Lake Biwa, Shiga Prefecture

Observations about working and living in Japan

- Everyone is very kind and helpful
- Long hours are no joke
- Working in science is quite similar to in the U.S., aside from some small cultural differences

