

2012 Young Researcher Symposium

PROGRAM

NOVEMBER 30, 2012



Dear Guest,

Thank you for attending the inaugural Young Researcher Symposium. The motivation for this event came from an Association of Students and Postdocs (ASAP) board meeting, where we discussed the importance of celebrating the excellent research that is performed by Brookhaven National Lab graduate students and postdocs. We have planned a fantastic scientific program featuring 21 oral presentations and 54 poster presentations by graduate students and postdocs. BNL's Esther Takeuchi will anchor the research portion of the day with a keynote presentation. We hope that after listening to the talks and visiting the posters, you will have a better understanding of the research that is conducted at BNL.

In 2012, the ASAP board shifted its focus from primarily social events to include professional development events such as today's symposium. The ASAP board recognizes the need to train our young researchers not only to be outstanding scientists but also give them the tools to be successful in today's tough economy. You'll notice that the career panel and IAEA agent Shirley Johnson's talk are targeted at the young scientific community to showcase possible career paths for PhDs (although we encourage all interested parties to attend!)

Today's symposium was organized by a group of postdocs, many of whom will also present their research. None of this would have been possible without their time, dedication, and ideas. Financial support was provided by the Director's Office, ASAP, and the sponsors listed on the back cover of this program. We encourage you to visit their booths during the exposition and the links provided on the YRS website.

It is our hope that the Young Researcher Symposium becomes an annual event and the highlight of the year for the BNL community. Thank you for your participation and support.

Sincerely,



Suzanne R. Golisz



Jonathan F. Hull

9:00 – 9:20	Welcome to YRS Doon Gibbs	Auditorium
9:25 – 9:45	Parallel Oral Sessions	A,B,C
9:45 – 10:05	Parallel Oral Sessions	A,B,C
10:05 – 10:25	Parallel Oral Sessions	A,B,C
10:30 – 11:00	A Day in the Life of a Nuclear Watchdog Shirley Johnson	Auditorium
11:00 – 12:00	Career Panel Carl Andre, Mark Doherty, Tianna Hicklin, Mathew Maye, Yolanda Small	Auditorium
12:00 – 2:00	Poster Session Exposition Lunch (on your own)	Lobby
2:00 – 2:20	Parallel Oral Sessions	A,B,C
2:20 – 2:40	Parallel Oral Sessions	A,B,C
2:40 – 3:00	Parallel Oral Sessions	A,B,C
3:00 – 3:20	Parallel Oral Sessions	A,B,C
3:30 – 4:30	Battery Science: The Keystone of the Energy Future (Making a Contribution) Esther Takeuchi	Auditorium
4:30 – 5:00	The Role of Postdocs and Graduate Students in BNL's Mission Sam Aronson Awards Presentation	Auditorium
5:00 – 6:00	Poster Session Reception	Lobby

Session Chair: Joe Brady

Programmable Self-Assembly of DNA-Nanoparticle Mesostructures
*Jonathan D. Halverson,
 A.V. Tkachenko**

N-alkylpyrrolidine-Alane Compounds for Energy Applications
*Chengbao Ni, L. Yang,
 J.T. Muckerman, J. Graetz**

Measuring Proton Beam Polarization at RHIC
*Dmitri Smirnov,
 E. Aschenauer**

Session Chair: Qin Liu

Microwave mobility of charge carriers on conjugated polymers
*Matthew J. Bird, A.R. Cook,
 J. R. Miller*

Analysis of the combined Hera-Zeus data set using the dipole model
*Merijn H.F. van de Klundert,
 R. Venugopalan,* A. Rezaeian,
 M. Siddikov*

Simulation of Psychography Experimental Design
*Shengyu Wang, D. Shapiro,
 K. Kaznatcheev*

Session Chair: Ofei Mante

Mapping the phase diagram of strong interactions with a beam scan at RHIC
Vladimir Skokov

Reactivity induced accidents in a light water reactor with fully ceramic micro-encapsulated fuel
*Nicholas R. Brown,
 M. Todosow*

Turn Humble into Noble in Hydrogen Energy: From Nanosheets to Biomass
*Wei-Fu Chen, K. Sasaki**

9:25-9:45 AM

9:45-10:05 AM

10:05-10:25 AM

<p>Physics at the future eRHIC <i>Salvatore Fazio</i></p>	<p>Well-defined core-shell nanocatalysts for renewable energy <i>Yu Zhang, Y. Hsieh, V.Volkov, D. Su, R. Si, L.Wu, Y.Zhu, W. An, P.Liu, J.X.Wang,* R.R. Adzic*</i></p>	<p>Plasmonic metal/inorganic/organic hybrid nanoclusters with regulated photoluminescence output <i>Zhongwei Liu, X. Wang, M. Cotlet*</i></p>
<p>Can Electroepitaxial Deposition be Used to Build 2D Supercrystals <i>Alex J. Krejci, C.G.W. Thomas, J. Mandai, I. Gonzalo-Juan, W. He, R.L. Stillwell, J. Park, D. Prasai, V.Volkov, K.I. Bolotin, J.H. Dickerson*</i></p>	<p>Surface Chemistry over Inverse Catalysts: UHV to NAP Conditions <i>Ashleigh E. Baber, K. Mudiyansele, S.D. Senanayake, A. Beatriz-Vidal, K.A. Luck, E.C.H. Sykes, P. Liu, J.A. Rodriguez, D.J. Stacchiola*</i></p>	<p>Monte Carlo simulation techniques used in the study of different physics channels at the future eRHIC at BNL <i>Liang Zheng</i></p>
<p>Development of an acoustic injector for high-throughput protein crystallography at the National Synchrotron Light Source II <i>Christian G. Roessler, M. Allaire, A.M. Orville, A.S. Soares*</i></p>	<p>eRHIC: a new collider to explore the femto-scale structure of protons and nuclei <i>Benedetto Di Ruzza</i></p>	<p>Density Functional Kinetic Monte Carlo Modeling of Water Gas Shift Reaction on ZnO-supported Cu Nanoparticles <i>Liu Yang, A. Karim, J.T. Muckerman</i></p>
<p>Reduction of Background in Observation of W Decay Using FVTX Tracker in PHENIX <i>Abraham Meles, X. Wang*</i></p>	<p>Front-end ASICs for High Resolution Detectors <i>Alessio D'Andragora, G. De Geronimo*</i></p>	<p>Insulator to metal transition in WOX induced by electrostatic charging <i>Xiang Leng, J. Strle, A. Bollinger, G. Dubuis, I. Bozovic*</i></p>

Name in *italics* — Presenter
Name with * — Supervising Scientist

Dr. Esther S. Takeuchi



Dr. Esther S. Takeuchi is a SUNY Distinguished Professor in the Departments of Materials Science and Engineering and Chemistry at Stony Brook University. She also has a joint appointment at Brookhaven National Laboratory as Chief Scientist in the Global and Regional Solutions Directorate.

Most recently, from 2007 to 2012, Dr. Takeuchi was a SUNY Distinguished Professor at the University at Buffalo in the Departments of Chemical and Biological Engineering, Electrical Engineering, Chemistry and Biomedical

Engineering. Prior to her academic appointment, she was employed at Greatbatch, Inc., where her achievements in lithium battery research, particularly on cells for implantable applications, led to a number of key technological developments, including the lithium/silver vanadium oxide (Li/SVO) battery, which powers the majority of implantable cardiac defibrillators (ICDs). A prolific inventor, she holds over 140 patents.

Dr. Takeuchi is a member of National Academy of Engineering and has received numerous awards for her research achievements. These include the Electrochemical Society Technology Award and the inaugural Lifetime Achievement Award presented by the Technical Societies Council of the Niagara Frontier. She has been inducted into the Western New York Women's Hall of Fame, and was selected for an inaugural Astellas Foundation Award by the American Chemical Society for scientific work impacting public health. In 2009, Dr. Takeuchi was awarded the National Medal of Technology and Innovation by President Obama. In 2010, she was awarded the Chancellor Charles P. Norton Medal. In May, 2011 she was inducted into the National Inventors Hall of Fame.

Dr. Takeuchi received a bachelor's degree from the University of Pennsylvania with a double major in chemistry and history and completed a Ph.D. in chemistry at the Ohio State University. She completed post-doctoral research at the University of North Carolina and University at Buffalo. Her research focus is novel power sources including development of new materials and investigation of faradaic and non-faradaic mechanisms relevant to battery systems.

Ms. Shirley J. Johnson



Ms. Shirley J. Johnson started her career working as an Analytical Chemist with expertise in separation systems at the Hanford Nuclear Site from 1969-1980. Ms. Johnson provided R&D support to separation processes. In 1980, she transferred to Idaho National Engineering Laboratory where she completed R&D work to establish sampling and measurement methodology in order to perform speciation studies that would help define the transport mechanisms of nuclear material during and after the Three-Mile-Island incident.

In 1982, Ms. Johnson was selected to work as a safeguards inspector for the International Atomic Energy Agency (IAEA). During her time at the IAEA, her work was focused toward the implementation of safeguards at reprocessing plants, primarily in Germany and Japan. She was Group Leader and then Section Head in SGOA Division for reprocessing and research facilities in Japan. In 1991, she was a member of the 4th IAEA inspection team to Iraq. Ms. Johnson was Head of the JNFL Project from 2001 to 2006 and then Section Head of SGOBI (India, Pakistan, Africa, Canada, and Switzerland) until she retired in April 2007.

Since retirement from the IAEA Ms. Johnson has established her own consulting business, Tucker Creek Consulting, PLLC, with a focus on nuclear non-proliferation and disarmament issues.

Ms. Johnson has been recognized with a number of awards including the 2005 Nobel Peace Prize for her work around the world in promoting the peaceful use of nuclear energy and preventing the spread of nuclear weapons as part of the IAEA team. She also received the 2005 Alumni Merit Award from Gonzaga University. In 2011, she was elected to the executive board of the Institute of Nuclear Material Management (INMM).

Ms. Johnson has authored and co-authored more than 50 papers on reprocessing safeguards, analytical chemistry techniques, facility design verification, and verification of an FMCT. She has held office positions within the American Nuclear Society, the American Chemical Society, and the Institute for Nuclear Materials Management. Ms. Johnson received her Bachelor of Science in Chemistry from Gonzaga University in 1969.

Carl Andre

Dr. Andre earned two bachelor's degrees from North Carolina State University in 2002; one in Botany and one in Biochemistry. In the same year he received a Plant Science Initiative Fellowship from Michigan State University and began work in the lab of Dr. Christoph Benning and in 2007 graduated from the Plant Research Laboratory with a Ph.D. in Plant Biology. After MSU he joined the lab of Dr. John Shanklin at Brookhaven National Laboratory as a postdoctoral research associate. In February 2012, he accepted a position at BASF Plant Science in Research Triangle Park, NC. His research career has largely focused on the biochemical regulation of plant metabolism, specifically seed oil biosynthesis.

Mark Doherty

Dr. Doherty attended graduate school at the University of North Carolina where he was awarded the Venable Scholarship and completed his Ph.D. under Maurice Brookhart before joining BNL as a research associate in 2007. He is currently a Lead Chemist in the Emissions Chemistry & Catalysis Laboratory at General Electric Global Research. His research interests include synthetic and mechanistic organometallic chemistry, NMR spectroscopy of transition metal complexes, homogeneous catalysis by transition metals, excited state photochemistry and photophysics of transition metal complexes, and photocatalytic CO₂ reduction related to solar energy conversion.

Tianna Hicklin

Dr. Hicklin studied biology at Colorado State University for her undergraduate education before earning a Ph.D. in neuroscience from the University of Colorado Anschutz Medical Campus. Prior to joining Science/AAAS, she worked as a science writer intern for the University of Colorado's Office of Media and Public Relations in Denver, Colorado and for Brookhaven National Laboratory's Media and Communications Office in Upton, New York. Dr. Hicklin is currently the assistant editor for the Science/AAAS Custom Publishing Office.

Mathew Maye

Dr. Maye is an Assistant Professor of Chemistry at Syracuse University. His research focuses on the synthesis, processing, and self-assembly of nanomaterials for applications in energy transfer, drug delivery, and fluorescence imaging. He recently received a DoD PECASE award, and his lab's discoveries to date include the preparation of core/alloy nanoparticles with tunable surface plasmon resonance and alloy phase behavior, as well as the use of semiconductive quantum rods for improved energy transfer and biomimetic assembly properties. He received his Ph.D. from SUNY-Binghamton in 2005 working under Professor C.J. Zhong, where he was a Department of Defense NDSEG graduate fellow. He performed postdoctoral work on DNA-mediated nanoparticle assembly at the Center for Functional Nanomaterials at Brookhaven National Laboratory under Dr. Oleg Gang as a Goldhaber Distinguished Fellow. His lab members are regular users of the Center for Functional Nanomaterials.

Yolanda Small

Dr. Small received her bachelor's degree from the University of Houston and completed her Ph.D. under Prof. Sharon Hammes-Schiffer at Penn State University in 2007. As a research associate at BNL, she worked with James Davenport and Jim Muckerman. Her research is at the interface of biology, chemistry and condensed matter physics where she applies computational techniques to address questions ranging from reactions in enzymes to reactions at the aqueous/semiconductor interface. Her scientific expertise is in Quantum Mechanical/Molecular Mechanical (QM/MM) modeling and simulations and electronic structure methods using Gaussian-based Density Functional Theory (DFT). Dr. Small and her students remain active users at the Center for Functional Nanomaterials.

1. **Materials Characterization for Displacement of Heating Oil Usage in Legacy Fuel Pumps**
Richard Anger, C.V. Brown, T.A. Butcher, C.S. Korach
2. **Surface Chemistry over Inverse Catalysts: UHV to NAP Conditions**
Ashleigh E. Baber, K. Mudiyansele, S.D. Senanayake, A. Beatriz-Vidal, K.A. Luck, E.C.H. Sykes, P. Liu, J.A. Rodriguez, D.J. Stacchiola
3. **Water Oxidation Mechanism with Ruthenium Complexes: Direct Pathway via Ru(IV) Oxo Species**
Yosra M. Badiei, D.E. Polyansky, J.T. Muckerman, D.J. Szalda, R. Haberdar, R. Zong, R.P. Thummel, E. Fujita
4. **Microwave absorption by mobile charges on conjugated polymers**
Matthew J. Bird, A.R. Cook, J.R. Miller
5. **MTERFI induces helix unwinding and base flipping as a mechanism to form a kinetically stable final state necessary for function**
James Byrnes, E. Yakubovskaya, E. Mejia, L. Norona, M. Garcia-Diaz
6. **Developing a Dual Mode (PET/Fluorescence) Tag for Imaging Plant-Signaling Peptides**
Patrick L. Cavins, T.E. Glass, X. Zhang, T.P. Quinn, F. Gabbai
7. **Structuring a More Functional 3D DNA Lattice**
Arun Richard Chandrasekaran, Y.P. Ohayon, E. Demirel, V.T. Adesoba, J.J. Birktoft, R. Sha, N.C. Seeman
8. **Slow Geminate Ion Recombination in THF**
Hung Cheng Chen, J.R. Miller
9. **In-situ and real time X-ray synchrotron study of multiferroic BiFeO₃ thin films**
Priya V. Chinta, R.L. Headrick
10. **High resolution line shape measurements of overlapping spectral lines**
Matthew J. Cich, S.W. Lee, S.M. Caiola, D. Forthomme, C.P. McRaven, G.E. Hall, T.J. Sears
11. **Investigating the response of scintillators for the detection of laser accelerated protons**
Nathan M. Cook, V. Yakimenko, O. Tresca, R. Lefferts
12. **Front-end ASICs for High Resolution Detectors**
Alessio D'Andragora, G. De Geronimo
13. **Monolithic Active Pixel Silicon Detectors for Future Electron Ion Colliders: Status and Plans**
Benedetto Di Ruzza, E. Aschenauer, B. Cole, K.T. Crowley, E. Hughes, D. Malinsky, M. Winter
14. **Guided-Mode Quantum Efficiency: A Novel Optoelectronic Characterization Technique**
Nanditha M. Dissanayake, A. Ashraf, Y. Pang, M.D. Eisaman
15. **The Role of ECM Proteins in Mediating Osteoblast Motility and Differentiation**
Kathryn Dorst, E. Farquhar, Y. Meng
16. **Development of an Environmental Cell for in situ Transmission X-ray Microscopy**
Christopher Eng, Y.K. Chen, Q. Yuan, J. Wang
17. **Physics at the future eRHIC**
Salvatore Fazio

18. **FeGa₃ – a strongly correlated insulator?**
Monika Gamza, A. Puri, J. Quinn, M. Aronson
19. **Imaging Anti-Ferromagnetic A-type domains in strongly correlated La_{1-x}Sr_{2-2x}Mn₂O₇**
Mirian García-Fernández, S.B. Wilkins, M. Lu, Q. Li, H. Zheng, J.F. Mitchell, D. Khomskii, J. Hill
20. **Reactivity of carbon dioxide with main group and transition metal elements**
Suzanne R. Golisz, D.C. Grills, D.E. Polyansky
21. **Structure of the essential MTERF4:NSUN4 protein complex reveals how an MTERF protein collaborates to facilitate rRNA modification**
Kip E. Guja, E. Yakubovskaya, E. Mejia, S. Castano, E. Hambardjiev, W.S. Choi, M. Garcia-Diaz
22. **Tutorials for metabolic modeling and simulation**
Jordan O. Hay, J. Schwender
23. **Field Pennycress (Thlaspi arvense): New model plant to study oil seed development**
Inga Hebbelmann, J. Shanklin, J. Schwender
24. **Developing CO₂ Sequestration Options: A Study of CO₂ Insertion into Preformed CH₄ Hydrate Using X-ray Computed Microtomography (CMT)**
Kristine Horvat, K. Jones, D. Mahajan
25. **Combining CO₂ reduction and H₂ storage under Mild Aqueous Conditions using Proton Switchable Iridium Catalysts**
Jonathan F. Hull, Y. Himeda, W.H. Wang, E. Fujita, J. Muckerman
26. **Materials characterization of novel nanoscale coiled-coil protein fibers**
Jasmin Hume, J. Sun, J.K. Montclare
27. **Understanding the Growth Mechanics of Perpendicular Recording Media**
Aaron C. Johnston-Peck, K.G. Yager, E.E. Marinero, E.A. Stach
28. **Size- and Composition-Dependent Enhancement of Electrocatalytic Oxygen Reduction Performance in Ultrathin Palladium-Gold Nanowires**
Christopher Koenigsmann, E. Sutter, R.R. Adzic, S.S. Wong
29. **Structure-based drug discovery for Botulinum neurotoxins by targeting its protease domain**
Gyanendra Kumar, D. Kumaran, R. Agarwal, S.A. Ahmed, S. Swaminathan
30. **Light-Driven Water Oxidation by a Molecular Ruthenium Catalyst**
Anna Lewandowska-Andralojc, D.E. Polyansky, R.P. Thummel, E. Fujita
31. **Single Crystal Spectroscopy Correlated with Macromolecular Crystallography at Beamline X26C for the Study of a Photoreceptor**
Feifei Li, E.S. Burgie, G. Shea-McCarthy, R.D. Vierstra, A.M. Orville
32. **Probing The Molecular Mechanism of Dimeric Organization of Castor Δ9-18:0 desaturase**
Qin Liu, J. Shanklin
33. **Cryo-Preservation of Membrane Samples for Grazing Incidence X-Ray Scattering Experiment**
Yimin Mao, L. Yang
34. **The Absence of Tertiary Interactions in a Self-Assembled DNA Crystal Structure**
Nam Nguyen, J.J. Birktoft, R. Sha, T. Wang, J. Zheng, P.E. Constantinou, S.L. Ginell, Y. Chen, C. Mao, N.C. Seeman
35. **Development of Cost-Effective and Environmentally-Benign Biogas Purification Technology Using Biochar**
Saurabh Patel, D. Mahajan

- 36. Synthesis and Characterization of Morphologically Distinctive Yttrium Manganese Oxides at the Nanoscale**
Jonathan M. Patete, A.L. Tiano, A.C. Santulli, J. Simonson, M.C. Aronson, M.G. Han, Y. Zhu, F.E. Camino, S.S. Wong
- 37. FlexE: a tool to evaluate protein models**
Alberto Perez, J. MacCallum, Y. Zhang, I. Bahar, K.A. Dill
- 38. High Polarization High Current Electron Gun for eRHIC**
Omer Rahman, I. Ben-Zvi, D. Gassner, A. Pikin, T. Rao, E. Riehn, B. Sheehy, J. Skaritka, E. Wang
- 39. Touchless sample preparation using acoustic energy for structure-based drug discovery**
Christian G. Roessler, M. Allaire, B. Eaton, K. Cole, R. Stearns, S. Datwani, J. Olechno, R. Ellson, A.M. Orville, A.S. Soares
- 40. In situ X-ray Analysis of High QE Multi-Alkali Photocathodes**
Miguel Ruiz-Osés, X. Liang, I. Ben-Zvi, K. Attenkofer, S. Schubert, T. Vecchione, H. Padmore, J. Smedley
- 41. Nickel(II) Macrocycles: Highly Efficient Electrocatalysts for the Selective Reduction of CO₂ to CO**
Jacob Schneider, E. Fujita
- 42. XPS and AFM Analysis of the K₂CsSb-Photocathodes Growth**
Susanne G. Schubert, M. Ruiz-Osés, X. Liang, T. Vecchione, H. Padmore, J.M. Smedley
- 43. Measuring Proton Beam Polarization at RHIC**
Dmitri Smirnov
- 44. Initiators assemble I. I MDa loading machines at DNA origin in the beginning**
Jingchuan Sun
- 45. Improving microalgal oil production based on quantitative analysis of metabolism**
Zhijie Sun, J. Hay, C. Yan, C. Xu, J. Schwender
- 46. Edge Radiation for Electron Beam Emittance Measurements**
Christina Swinson, M. Fedurin, V. Yakimenko
- 47. Manual Calibration System of the Daya Bay Reactor Neutrino Experiment**
Harry W. Themann, Z. Isvan, E. Worcester
- 48. A General Protocol for the Synthesis of MFe₂O₄ ('M' = Mg, Fe, Co, Ni, Cu, and Zn) Nanoparticles**
Amanda L. Tiano, G. Papaefthymiou, K. Guerrero, C. Zhang, Q. Li, S.S. Wong
- 49. Simulation of Ptychography Experimental Design**
Shengyu Wang, D. Shapiro, K. Kaznatcheev
- 50. Cu-based Nanocatalysts for the Production of Methanol**
Yixiong Yang, M.G. White, P. Liu
- 51. Protein-templated nanomaterials**
Liming Yin, K.R. Mehta, N. Hom, K. Kirshenbaum, J.K. Montclare
- 52. Characterization Of Graphene-Ferroelectric Hybrid Devices**
Mohammed H. Yusuf, X. Du, M. Dawber
- 53. Measuring Hydrogen Evolution/Oxidation on Gas Diffusion Electrodes**
Yu Zhang, Y.C. Hsieh, V. Volkov, D. Su, R. Si, L. Wu, Y. Zhu, W. An, P. Liu, R.R. Adzic, J.X. Wang
- 54. Electrochemical and Photoelectrochemical Water Oxidation by Mononuclear Ru(II) Catalysts Functionalized onto Metal Oxide Surfaces**
Diane K. Zhong, S. Zhao, D.E. Polyansky, J.F. Hull, E. Fujita

YRS ■ FEEDBACK FORM ■ 2012

Thank you for attending YRS 2012. Your response to this survey is essential to ensuring a successful event for years to come. Please take a few minutes to answer the questions below. Your completed survey may be deposited in the box outside Berkner Auditorium.

1. Who are you? (Check one)

- | | |
|---|---|
| <input type="checkbox"/> BNL Scientific Staff | <input type="checkbox"/> BNL Non-Scientific Staff |
| <input type="checkbox"/> Postdoc/Graduate Student | <input type="checkbox"/> External Guest |

2. How did you hear about YRS? (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Monday Memo | <input type="checkbox"/> Bulletin |
| <input type="checkbox"/> ASAP Mailing List | <input type="checkbox"/> Posters around BNL |
| <input type="checkbox"/> Email Invitation | <input type="checkbox"/> Word of Mouth |
| <input type="checkbox"/> Other: _____ | |

3. What session(s) did you attend today? (Check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Opening Remarks (Doon Gibbs) | <input type="checkbox"/> Poster Session |
| <input type="checkbox"/> Oral Session (AM) | <input type="checkbox"/> Oral Session (PM) |
| <input type="checkbox"/> Career Lecture (Shirley Johnson) | <input type="checkbox"/> Keynote Talk (Esther Takeuchi) |
| <input type="checkbox"/> Career Panel | <input type="checkbox"/> Concluding Remarks (Sam Aronson) |
| <input type="checkbox"/> Exposition | <input type="checkbox"/> Reception |

4. Please rate the usefulness of the symposium from 1 to 5 in the following areas with 1 being not useful and 5 being very useful.

	1	2	3	4	5
Enhancing knowledge of BNL research activities					
Initiating collaboration across BNL departments					
Networking					
Learning about vendors					
Getting career advice					

- | | | |
|---|-----|----|
| 5. Will you attend next year? | YES | NO |
| 6. Would you recommend that your friends and colleagues attend next year? | YES | NO |
| 7. Would you like to be a presenter (either oral or poster) next year? | YES | NO |

continued on reverse

YRS ■ FEEDBACK FORM ■ 2012

8. If you would like to volunteer to help organize next year's symposium, please provide your name and email here:

Name

Email

9. Tell us what you loved about this year's event:

10. Tell us what you would like to see changed for next year:

Thank You

Rick Backofen

Tiffany Bowman

Scott Bronson

Chris Carter

Ruth Comas

Kay Cordtz

Jeanne D'Ascoli

Peter Daum

Peter Genzer

Justin Eure

James Green

Gregory Hall

Lisa Jansson

Thomas Ludlam

Danielle Pontieri

Thomas Roser

Liz Steubert

Roger Stoutenburgh

Chris Weaver

Susan White-DePace

Stan Wong

Special thanks to all of the scientists that served as judges
for both the poster and oral sessions.

Organizing Committee

Ashleigh Baber, Joseph Brady, Jordan Hay, Zeynep Isvan, Lokesh Kumar,
Seetha Lakshmi Lalitha, Qin Liu, Ofei Mante, Jake Schneider,
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