ECS 2014 Summer Fellowship Winners

Each year ECS awards Summer Fellowships to assist students in continuing their graduate work during the summer months in a field of interest to the Society. Congratulations to the following five Summer Fellowship recipients in 2014. The reports of the 2014 Summer Fellows will appear in the winter issue of *Interface*.

Tuncay Ozel is the recipient of the 2014 ECS Edward G. Weston Summer Fellowship. He received his BS and MS degrees from Bilkent University, Turkey. He is currently a PhD candidate in the department of materials science and engineering at Northwestern University working under the supervision of Chad Mirkin on the synthesis of hybrid semiconductor nanowires and their applications. Recently, Tuncay and his co-workers have invented a technique, termed coaxial lithography (COAL), bridging templated electrochemical synthesis and lithography to generate coaxial nanowires in a parallel fashion with structural control in multiple dimensions in an unusual way. COAL will be extremely useful for prototyping device architectures that demand components and features not easily made by any existing technique, and as such should become a valuable research tool in the nanophotonics, energy harvesting, and nanotechnology fields for studying fundamental light-matter interactions. To list some of his scientific contributions, Tuncay has published 20 SCI papers (more than 500 citations), given numerous presentations, and is a co-inventor on four patents. Furthermore, he was awarded with multiple prestigious fellowships and prizes during his academic studies.

Christena K. Nash is the recipient of the 2014 ECS Colin Garfield Fink Summer Fellowship. She received her BS in Chemistry from the University of Arkansas, Fayetteville, USA in 2009. Christena is a graduate student performing research in the laboratory of Ingrid Fritsch toward completion of a doctorate. She was honored with the A.W. Cordes Chemistry Award in 2012 for outstanding teaching and the Collis Geren Award in 2013 for excellent graduate work by the University of Arkansas Department of Chemistry and Biochemistry. Her present work involves the electrodeposition of conducting-polymer modified onto microelectrodes and their application in redox-magnetohydrodynamic microfluidic pumping.

Andrey Gunawan is the recipient of the 2014 ECS Joseph W. Richards Summer Fellowship. He is currently a PhD candidate in Mechanical Engineering at Arizona State University (ASU), leading a NSF-funded interdisciplinary research project on thermogalvanic energy conversion for harvesting electricity from low-grade thermal energy, such as low-temperature geothermal, low-temperature solar thermal, and waste heat from industrial processes, power plants, or automobiles. He was born in Jakarta, Indonesia and attended the Institut Teknologi Bandung where he obtained his BS in Aeronautics and Astronautics in 2008. After graduating, he decided to come to United States to pursue higher education. He received his MS in Aerospace Engineering consecutively in 2010 from the University of Southern California, before joining Patrick Phelan's lab at ASU. Much of Andrey's early PhD work focused on nanofluids-based solar thermal energy conversion. His research interests also include flexible thermoelectrics and self-powered portable/wearable electronics. Outside the lab, he has volunteered with the Institute of Electrical and Electronics Engineers (IEEE) Transportation Electrification Newsletter as an editor since its inception in April 2013, before promoted to lead editor in September.

Brandy Kinkead is the recipient of the 2014 ECS F.M. Becket Summer Fellowship. She is currently a PhD candidate in the Department of Chemistry at Simon Fraser University in Burnaby, BC, Canada. Brandy completed a BSc Honors degree in chemistry at the University of Manitoba in December 2009. During her undergraduate degree, she conducted research under the supervision of Torsten Hegmann. Their discoveries in the in the area of liquid crystal-nanoparticle composites resulted in 8 peer-reviewed publications (4 of which were featured as journal covers), and a patent. She began her PhD at Simon Fraser University under the supervision of Byron Gates in January 2010. The focus of her doctoral research is the design, development and characterization of Pt-based electrocatalysts for fuel cell applications – driven by the desire to optimize Pt effective utilization in order to minimize the mass of Pt required in electrocatalytic applications. Much of this research is being carried out in collaboration with Gregory Jerkiewicz, whose expertise in the area of Pt electrochemistry complements their skills in materials chemistry. Throughout her university career, Brandy has been actively involved in a number of volunteer organizations. In 2008, she acted as organizational chair for the 22nd Annual Western Canadian Undergraduate Chemistry Conference Organizing Committee; in 2010, she joined the Simon Fraser University Chemistry Graduate Association and acted in various capacities for the next 3 years; most recently, she helped to establish the British Columbia Electrochemical Student Society, of which she is currently vice-chair. She am now in the process of completing her PhD and looking forward to pursuing opportunities to further her career.

Hadi Tavassol is the recipient of the 2014 ECS H. H. Uhlig Summer Fellowship Award. He received his BSc in Applied Chemistry from Sharif University of Technology (Tehran, Iran), where he worked on electrochemical detection of DNA hybridization under the supervision of Professor Vossoughi. He then joined Northern Illinois University, where he received his MSc in Analytical Chemistry working on electrochemistry of liquid/liquid interfaces under the supervision of Petr Vanýsek. Currently he is a PhD candidate in the Department of Chemistry at University of Illinois at Urbana-Champaign, working in the laboratory of Andrew A. Gewirth. His research focuses on the interfacial processes in Li ion batteries. He employs novel in-situ and ex-situ techniques to investigate solid electrolyte interphase (SEI) components and characteristics, atomistic effects of Li interaction with anode materials, and structural effects of Li deposition.

Student Award Winners

Student Research Award of the Battery Division

Martin Ebner has been named the Battery Division's 2014 Student Research Award recipient. This award was established in 1962 and is given annually to recognize young engineers and scientists in the field of electrochemical power sources. Martin Ebner is a postdoctoral researcher at the Laboratory for Nanoelectronics, headed by Vanessa Wood, at the Swiss Federal Institute of Technology (ETH Zurich) in Switzerland. He holds BS (2005-2008) and MS (2008-2010) degrees from ETH Zurich in Electrical and Mechanical Engineering, respectively.

After an internship in the MEMS division of ST Microelectronics in Milan, Italy, Dr. Ebner joined the Institute for Solid State Electronics at Technische Universität Wien (TU Wien) in Vienna, Austria, for his Masters thesis. Co-supervised by ETH Professor Christopher Hierold, he investigated methods to control CVD-grown silicon nanowires for photovoltaic applications.

Dr. Ebner received his PhD (2011-2014) under the supervision of Professor Wood. His PhD research focused on analyzing the microstructure of porous lithium ion battery electrodes. Using synchrotron x-ray tomography, he studied the impact of electrode microstructure on fast-charging performance, battery life, and material degradation. As a result of this research, Dr. Ebner developed methods to control electrode microstructure to increase cell-level energy density and charging rates and to drive down manufacturing costs. His postdoctoral research, which is supported by an ETH Pioneer Fellowship, focuses on advancing these techniques and demonstrating industrial feasibility. Dr. Ebner received a fellowship from the Gebert Rüf Foundation in 2013, and the Material Research Society Graduate Student Gold Award in April 2014..

Morris Cohen Graduate Student Award of the Corrosion Division

Yolanda S. Hedberg has been named the Corrosion Division's 2014 Morris Cohen Graduate Student Award recipient. This award was established in 1991 and is given annually to recognize outstanding graduate research in the field of corrosion science or engineering. Yolanda S. Hedberg is currently a postdoc, researcher and teacher (corrosion and trace metal analysis) at KTH Royal Institute of Technology and at Karolinska Institutet (medical university), in Stockholm, Sweden.

Dr. Hedberg earned a MSc degree in Material Science at the Friedrich-Alexander University (FAU) in 2009. She conducted parts of the undergraduate studies at KTH in Stockholm 2007-2009, and succeeded with a Ph.D study scholarship application for highly talented students from the German organization Cusanuswerk. This financial and social support, in addition to several industry-related projects and interdisciplinary and international research constellations, enabled in-depth PhD studies with a large degree of freedom and guest researcher visits at Vienna University of Technology, Austria, and FAU, Germany.

In the end of 2012, Dr. Hedberg defended her PhD thesis with the title "Stainless Steel in Biological Environments – Relation between Material Characteristics, Surface Chemistry and Toxicity," mainly supervised by I. Odnevall Wallinder. By that time she had published 22 papers in 20 scientific journals of varying disciplines including materials science, corrosion science, toxicology, environmental science, and surface chemistry. Since then is Dr. Hedberg active in the area of metal allergy aspects together with dermatologists, owing to a successful postdoc grant application. Dr. Hedberg is furthermore working in an interdisciplinary research team on aspects of metal nanoparticle toxicity, and on stainless steel in food applications together with international metal associations.

Dr. Hedberg recently received the 2014 AkzoNobel Nordic Award for Surface and Colloid Chemistry.

Student Chapter News

British Columbia Student Chapter

On Wednesday June 4th, the ECS British Columbia (BC) Student Chapter held a student mixer for all of its members and relevent attendees during the 97th Annual Canadian Chemistry Conference and Exhibition in conjunction with the Solid State Division of the Canadian Society for Chemistry. The goal of this event was to increase awareness within the electrochemical and solid state community of the relatively new student chapter and provide an atmosphere for open discussion between students with similar research interests. The event attracted over fifty attendees and generated some great discussions about research, involvement with the student chapter and up-coming events, including the annual BC Young Electrochemists Symposium (YES 2014), held a month later.

The second annual BC Young Electrochemists Symposium organized by the ECS BC Student Chapter on July 4th, 2014 took place at the Chemical and Biological Engineering Department building, the University of British Columbia (UBC) in Vancouver. The one-day symposium included five presentations by well-known scientists as well as a student poster presentation session funded by The Electrochemical Society and the UBC Chemical & Biological Engineering Department. It attracted more than fifty-five attendees from different departments at the University of British Columbia, Simon Fraser University and Western Washington University. This year, ECS BC Student Chapter proudly hosted five interesting talks in the field of electrochemistry by Curtis Berlinguette (Professor at UBC), Hogan Yu (Professor at Simon Frazer University), Amin Aziznia (Research Engineer at Mantra Energy Alternatives Ltd.), Thomas Kadyk (Post-doctoral fellow at Simon Frazer University) and Alix Melchy (Post-doctoral fellow at Simon Frazer University). Two cash prizes and one honorary gift were also awarded to best poster presenters: Heather Baroody (1st), Huihui Tian (2nd) and Sean McBeath (3rd).

Interesting logo of the student chapter, invoking a voltammogram and Vancouver whale watching.

Some of the attendees, invited speakers, and organizers of the Second Annual Young Electrochemists Symposium 2014. Speakers of YES 2014: **Curtis Berlinguette** *(first on the left in the front row),* **Hogan Yu** *(second on the left, front row),* **Amin Aziznia** *(first on the left, second row),* **Thomas Kadyk** *(front row, sixth from the left) and* **Alix Melchy** *(seventh from the left, back). Organizing Committee of YES 2014:* **Mohammad Saad Dara**, *Chair of the ECS BC Student Chapter (first person in the front row on the right),* **Brandy Kinkead**, *Vice Chair (ninth person in the front row on the right),* **Pooya Hosseini Benhangi**, *Treasurer (fourth person in the front row on the left), and* **Andrew Wang**, *Secretary (fifth person in the front row on the right).*

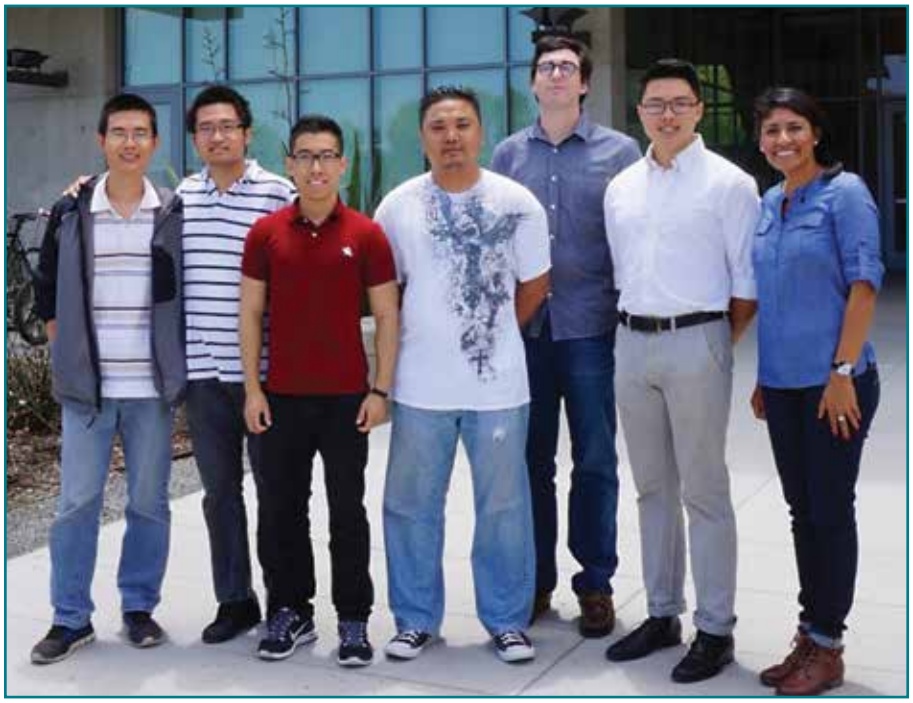
University of California San Diego Student Chapter

The newly established UCSD Student Chapter is proudly presenting its first report. Similar to many other student chapters, our mission is to promote the interest and advancement of electrochemical science and technology among students here at UCSD. Our supportive faculty advisor, Shirley Meng, is head of the UCSD Laboratory for Energy Conversion and Storage. With everyone's enthusiastic efforts, our ECS chapter will undoubtedly succeed in achieving the great yet attainable visions we have for the organization. We look forward to finally building a coherent community of electrochemists at UCSD, new relationships with other fellow student chapters, and partners outside of the UCSD community. The upcoming 2014-2015 school year looks fruitful for electrochemical science!

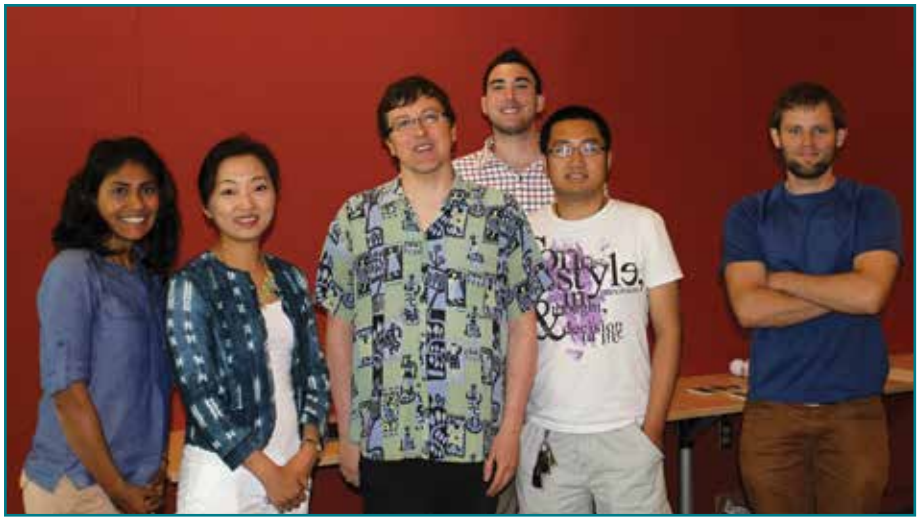
With the excitement of a new ECS student chapter, the founding members wanted to demonstrate their enthusiasm by hosting their first seminar on June 25, 2014. Although this chapter had been only active for a month, it was a great pleasure to host our first speaker. With the help of Professor Meng, Olaf Magnussen from the Institute of Experimental and Applied Physics of the Christian-Albrechts-Universität (CAU) in Kiel, Germany presented his work on "Surface dynamics at electrochemical interfaces." During his talk, he introduced his work on fast *in situ* scanning tunneling microscopy (Video-STM), which allows direct observation of the atomic motion at the interface. With the help of statistical analysis, quantitative data on the diffusion barriers and interaction energies can be deduced from the STM videos.

This seminar brought students from various departments such as of Physics, Chemistry, Materials Science, and Nanoengineering. The students at UCSD show great interest in electrochemistry and the ECS organization. With this seminar the organization has gained 25 new members. This summer, we hope to plan the events for the upcoming academic school year (2014-2015) and host more seminars.

More about UCSD can be found on their web page at www.ucsdecs.org.



Founders of the ECS UCSD Student Chapter 2014. From left: **Jiajia Huang**, **Haodong Liu**, **Ryan Lu**, **Han Nguyen**, **Jeremy Rosenfeld**, **Jimmy Mac** *and* **Judith Alvarado** *in front of the Structural and Materials Engineering building of the UC San Diego Jacobs School of Engineering.*



UCSD students and faculty after the seminar. From left: **Judith Alvarado**, **Ying Shirley Meng**, *the speaker* **Olaf Magnussen**, **Haodong Liu**, **Jeremy Rosenfeld**, *and* **Tom Yersak**.

Indiana University Student Chapter

Indiana University, Bloomington, Indiana, is home to a newly active student chapter of The Electrochemical Society. The chapter began in the fall of 2012 to promote electrochemistry on campus and has since grown in membership to include both graduate and undergraduate students with a variety of academic interests. Many different events have been organized this year including volunteering at a science museum in Indianapolis and socializing at a holiday potluck.

Indiana University's Science Open House is the largest public outreach event of the year. This past academic year, October 26, 2013, the chapter volunteered the full day in an electrochemistry themed room that the members set up and assisted local children and adults of all ages to see how electrochemistry affects their lives. Reactions demonstrated physical changes, such as the color change when nickel salen changes oxidation state, as well as a hydrolysis reaction which was apparent through bubbles and balloons. A hydrogen remote-controlled model car was the key feature in the middle of the room; younger students raced the cars while middle and high school students asked insightful questions about the feasibility of these vehicles in the future.

During the 2014 spring semester, students met to discuss various research interests and share ideas about new methods. Chapter vice president, Anna Webber, hosted this year's departmental electrochemistry demonstration showcasing various scanning probe microscopy techniques. Students saw and learned about the instrumental designs as well as types of information gathered from AFM, SECM, and SICM.

Most recently, the chapter organized a special seminar for guest speaker, Keith Stevenson, of the Department of Chemistry & Biochemistry, University of Texas (Austin). Students volunteered to organize various aspects of this visit and many research groups were able to meet with him to discuss emerging electrochemical themes. Professor Stevenson was invited to present a seminar highlighting his work with spatially-resolved charge transfer processes. This presentation appealed to many of our chapter members' interests with a focus on interrelated topics of electrochemical processes, spectroscopy, and development of new materials for energy storage. Students later had the opportunity to meet with Professor Stevenson at a reception in his honor, at which possible collaborations were broached. The success of this event is already encouraging the chapter to plan for another seminar next year.

Students and faculty attended a reception for guest, Dr. Stevenson. From left to right: Keith Stevenson, Caitlyn McGuire, Lauren Strawsine, Erin Martin, Anna Weber, Kristin Morton, Lushan Zhou, Wenqing Shi, Yi Zhou, *and* Dennis Peters.

University of Maryland Student Chapter

The University of Maryland Student Chapter teamed up with ECS staff to present electrochemistry demonstrations and give information about The Electrochemical Society at the 3rd Annual USA Science and Engineering Festival in Washington, DC from April 24-27th. ECS Director of Development Dan Fatton and Development Manager Christie Knef ran the booth, with six UMD students running demonstrations of electrochemical, dye-sensitized solar cells.

The annual festival was founded by Lockheed Martin in 2012, and has rapidly gained a massive attendance. The 2014 event attracted over 325,000 attendees (>50% of the population of DC) from several states over 4 days. Its mission is to re-invigorate the interest of our nation's youth in science, technology, engineering and math (STEM) by producing and presenting the most compelling, exciting, educational and entertaining science festival in the United States. For more information, visit www.usasciencefestival.org.

The UMD chapter has established participation in several other recurring academic outreach programs as well. This year they ran their second dye-sensitized solar cell (DSSC) workshop at NIST for its *Adventure in Science* program for middle school students. The demo involves building an electrochemical solar cell to learn how the energy in light can be converted into useful electricity. Rather than using expensive ruthenium-based dyes typical in the most efficient DSSCs, the students used anthocyanins, the pigments in blackberry juice, to sensitize the titania electrodes. Transparent graphite electrodes were applied using a standard pencil. The participants competed with each other to build the most powerful cells based on what they learned about the electrochemistry cell background, impressed that everyday items could be used to harness the sun's energy.

The chapter also agreed to be annual judges at the Hyattsville Middle School (HMS) STEM fair for 6-8th grade students and to volunteer for other events at the school as well. HMS is only three miles from UMD, making for a natural partnership. It was also chosen for long-term partnership because teachers at HMS related that many of the students are from economically disadvantaged families, so they often could use more outside support for their studies. Thus, the chapter's mission was partly to give critical feedback, but also to focus on the tasks that were accomplished well, continually encouraging scientific thinking in the young students. That said, during their first stint as science fair judges the chapter members met a number of students with resourceful projects and quite keen insights on conducting controlled experiments. The chapter looks forward to more interactions with HMS students.

William Gibbons *(former UMD Student Chapter VP) quizzes student participants on solar cell efficiency calculations.*

Tom Hays *(UMD Student Chapter VP) and* **Hanna Nilsson** *evaluate student science fair presentations at Hyattsville Middle School.*

Advertisers Index

North Florida Student Chapter

With eight members, the students from Florida A&M University and Florida State University founded the North Florida Student Chapter of ECS in 2014. Prior to the chapter official existence, students were already performing and presenting research on energy storage related projects. In addition, the chapter members were also engaged in community service, with events aimed towards teaching community youth the fundamentals of electrochemistry.

One of the members of the student chapter, Venroy Watson, a PhD student in chemical engineering, researches the optimization of electrolytes and electrodes for the improvement of redox flow battery performance. He intends to contribute to science and engineering through the ECS student chapter, where he can share his knowledge with others and learn from others experience at the same time. He sees the benefits of collaborative work environments to solve common problems faced in the field of electrochemical science and engineering.

Annadanesh Shellikeri, the founding Vice President of the chapter and a PhD candidate in electrical engineering, researches energy storage devices like Li-air batteries and supercapacitors using nuclear magnetic resonance spectroscopy. He values the scientific and professional benefits ECS will provide and aims to share these benefits with future ECS student members and the community through student chapter outreach activities

This coming year, the chapter plans to continue these events, with student research symposia, membership recruitment, and outreach. It will also organize lab tours for the local school kids to a battery assembly line facility at Energy Research Center, Tallahassee. In addition, local laboratories, National High Magnetic Field Laboratory and Center for Advanced Power Systems, will host open houses that will give the chapter opportunities to showcase the organizations and related research. Chapter members who are members of other organizations can present the ECS goals to share common goals and increase membership. The chapter hopes to complete a successful upcoming year with funds generated from chapter fundraisers, membership dues, and ECS assistance.

A group of North Florida Student Chapter members, (left to right) **Derrick Ngyuen**, **Annadanesh Shellikeri** *(Vice President),* **Charles Oladimeji** *(Secretary),* **Jamal Stephens**, **Pedro Moss** *(Faculty Advisor),* **Ruben Nelson** *(President),* **Venroy Watson**, *and* **Shannon Anderson**.

Norwegian University of Science and Technology Student Chapter

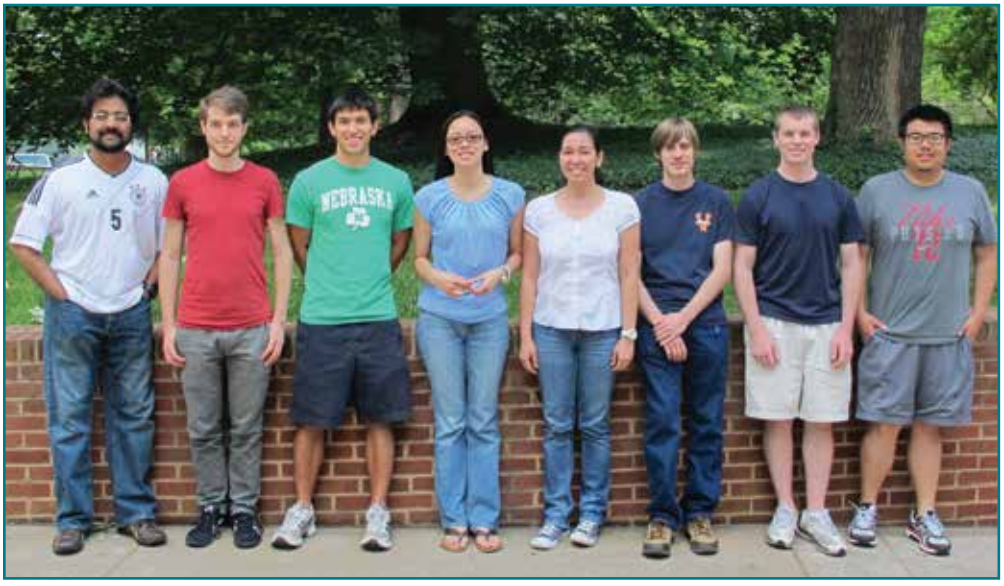
The ECS Student Chapter at the Norwegian University of Science and Technology (NTNU) in Trondheim, Norway, nicknamed "ElectrocheMystery," is led by Ann Mari Svensson who is the faculty advisor. The activity is run by a student board of PhD candidates in electrochemistry. The group organized a seminar on April 29, 2014 with 20 participants. Among the participants were professors and graduate students from the Department of Materials Science and Engineering. Apart from the scientific content of the seminar program, the meeting venue located next to a ski center outside the city offered a nice opportunity for the participants to enjoy hiking and an ensuing BBQ and sauna under the snow.

Group picture of the NTNU seminar participants outside the ski lodge.

Master students and PhD candidates with research interests covering a wide range of topics such as supercapacitors, lithium-ion batteries, fuel cells and electrolytic metal production presented their results at the seminar to their colleagues. The presentations were followed by Q&A session and fruitful discussions that enlightened the candidates and allowed them to acquire new perspectives on their research. Interactions among the participants were high enough that many questions related to specific problems were resolved in private discussions after the seminar.

At the end of the day, the participants expressed their satisfaction and agreed on the importance of the future events to grow further and expand the scope of the chapter.

University of Virginia Student Chapter



The University of Virginia ECS Student Chapter Executive Body: (from left) **Jay Srinivasan**, **Pierce Robinson**, **Michael Nguyen**, **Mary Lyn Lim**, **Noelle Co**, **Scott Lee**, **Rob Golden**, *and* **Gilbert Liu**.

The University of Virginia ECS Student Chapter grew to 40 members this year. The chapter consists of students from the Materials Science and Engineering, Chemical Engineering, and Chemistry Departments working on various aspects of electrochemistry such as bioanalytical electrochemistry, batteries, high temperature oxidation, corrosion, and environmentally-assisted cracking. The chapter has planned a range of activities for the year 2014-2015 including a monthly seminar series on electrochemistry-related topics, student symposia, and short courses. The first seminar was held in July and the speaker was Raul B. Rebak from GE Global Research's Corrosion Research Group.

Student Awards

Call for Nominations

Visit
www.electrochem.org
and click on the "Awards" link.

For details on each award—including a list of requirements for award nominees, and in some cases, a downloadable application form—please go to the ECS website (www.electrochem.org) and click on the "Awards" link. Awards are grouped in the following categories: Society Awards, ECS Division Awards, Student Awards, and ECS Section Awards. Please see the individual award call for information about where nomination materials should be sent; or contact ECS headquarters.

The **ECS Summer Fellowships** were established in 1928 to assist students during the summer months in pursuit of work in the field of interest to ECS. The next fellowships will be presented in 2015. Please visit the ECS website for more information.

Nominations and supporting documents should be sent to *ECS Summer Fellowships*, c/o The Electrochemical Society, 65 S. Main Street, Building D, Pennington, NJ 08534; Phone: 609.737.1902; e-mail: awards@electrochem.org. Electronic submission of nomination packets is preferred. **Materials are due by January 15, 2015.**

The **ECS Outstanding Student Chapter Award** replaced the Gwendolyn Wood Section Excellence Award, and was established in 2012 to recognize outstanding ECS Student Chapters. Up to three winners will be selected. One Outstanding Student Chapter will be selected with the winner receiving $1,000, and recognition with a plaque and chapter group photo in *Interface*. One or two additional Student Chapters may be selected as runners-up, and designated as Chapters of Excellence. Recognition certificates will be mailed to the Chapters of Excellence. The next awards will be presented in 2015. Please visit the ECS website for more information.

Nominations and supporting documents should be sent to *ECS Outstanding Student Chapter*, c/o The Electrochemical Society, 65 S. Main Street, Building D, Pennington, NJ 08534; Phone: 609.737.1902; e-mail: awards@electrochem.org. Electronic submission of nomination packets is preferred. **Materials are due by March 31, 2015.**

The **Student Research Award of the Battery Division** was established in 1962 to recognize promising young engineers and scientists in the field of electrochemical power sources and consists of a scroll, a prize of $1,000, waiver for the meeting registration, travel assistance to the meeting if required, and membership in the Battery Division as long as a Society member. The next award will be presented at the ECS fall meeting in Phoenix, Arizona, October 11-16, 2015.

Nominations and supporting documents should be sent to *Battery Student Award*, c/o The Electrochemical Society, 65 S. Main Street, Building D, Pennington, NJ 08534; Phone: 609.737.1902; e-mail: awards@electrochem.org. Electronic submission of nomination packets is preferred. **Materials are due by March 15, 2015.**

The **Canada Section Student Award** was established in 1987 for a student pursuing, at a Canadian University, an advanced degree in any area of science or engineering in which electrochemistry is the central consideration. The award consists of consists of a monetary award determined by the Section Executive Committee not to exceed $1,500 US. The next award will be presented at a meeting of the Canada Section in 2015.

Nominations and supporting documents should be sent to *Canada Section Student Award*, c/o The Electrochemical Society, 65 S. Main Street, Building D, Pennington, NJ 08534; Phone: 609.737.1902; e-mail: awards@electrochem.org. Electronic submission of nomination packets is preferred. **Materials are due by February 28, 2015.**

The **Morris Cohen Graduate Student Award of the Corrosion Division** was established in 1991 to recognize outstanding graduate research in the field of corrosion science and/or engineering. The award consists of a scroll, a prize of $1,000, and travel assistance to the meeting where the award will be presented (up to $1,000). The next award will be presented at the ECS fall meeting in Phoenix, Arizona, October 11-16, 2015.

Nominations and supporting documents should be sent to *Corrosion Cohen Award*, c/o The Electrochemical Society, 65 S. Main Street, Building D, Pennington, NJ 08534; Phone: 609.737.1902; e-mail: awards@electrochem.org. Electronic submission of nomination packets is preferred. **Materials are due by December 15, 2014.**

Student Travel Grants

Several of the Society's Divisions offer travel assistance to students and early career professionals presenting papers at ECS meetings. For details about travel grants for the 227th ECS meeting in Chicago, Illinois, please see the Chicago Call for Papers; or visit the ECS website: www.electrochem.org/student/travelgrants.htm. Please be sure to click on the link for the appropriate Division as each Division requires different materials for travel grant approval prior to completing the online application. You must submit your abstract and have your abstract confirmation number in order to apply for a travel grant. Apply for travel grants using the online submission system (links found on the travel grant web page). If you have any questions, please email travelgrant@electrochem.org. **The deadline for submission for spring 2015 travel grants is January 1, 2015.**

Awarded Student Memberships Available

ECS Divisions are offering Awarded Student Memberships to qualified full-time students. To be eligible, students must be in their final two years of an undergraduate program or enrolled in a graduate program in science, engineering, or education (with a science or engineering degree). Postdoctoral students are not eligible. Awarded memberships are renewable for up to four years; applicants must reapply each year. Memberships include article pack access to the ECS Digital Library, and a subscription to *Interface*. To apply for an Awarded Student Membership, use the application form below or refer to the ECS website at: www.electrochem.org/awards/student/student_awards.htm#a.

Awarded Student Membership Application

ECS Divisions are offering Awarded Student Memberships to qualified full-time students. To be eligible, students must be in their final two years of an undergraduate program or be enrolled in a graduate program in science, engineering, or education (with a science or engineering degree). Postdoctoral students are not eligible. Awarded memberships are renewable for up to four years; applicants must reapply each year. Memberships include article pack access to the ECS Digital Library and a subscription to *Interface*.

Personal Information

Name: _____ Date of Birth:_____

Home Address: _____

_____

Phone:_____ Fax: _____

Email: _____

School Information

School: _____

(please include Division and Department)

Address: _____

_____

Undergraduate Year (U) or Graduate Year (G) - circle one: U3 U4 G1 G2 G3 G4 G5

Major Subject: _____ Grade Point Average: _____ out of possible:

Have you ever won this award before? NO _____ YES_____ If yes, how many times? _____

Divisions (please select only one):

- ❑ Battery
- ❑ Corrosion
- ❑ Dielectric Science & Technology
- ❑ Electrodeposition
- ❑ Electronics and Photonics
- ❑ Energy Technology
- ❑ High Temperature Materials
- ❑ Industrial Electrochemistry & Electrochemical Engineering
- ❑ Luminescence & Display Materials
- ❑ Nanocarbons
- ❑ Organic & Biological Electrochemistry
- ❑ Physical and Analytical Electrochemistry
- ❑ Sensor

Signatures

Student Signature: _____ Date:

Faculty member attesting to eligibility of full time student:

Faculty Member: _____ Dept.: _____

E-mail Address: _____ Date: _____