Date: 13 October 2025

JSPS US AND CANADA ALUMNI ASSOCIATION SEMINAR PROGRAM

REPORT

Organizer (Awardee)

Name: Michael P. Schramm, Ph.D.

Position & Affiliation: Professor of Chemistry, California State University Long Beach

1. TITLE OF SEMINAR

Solvent-Alone-Driven Cross-Coupling of Fluorenones for Synthesis of Dibenzo[g,p]chrysenes

2. DATE(S)

9/16, 9/17, 9/19 2025

3. VENUE & CITY, STATE

University of California Riverside, Riverside CA USA
California State University Long Beach, Long Beach CA USA
San Diego State University, San Diego CA USA

4. TARGETED RESEARCH AREAS

(1) Materials Science (2) Organic Synthesis (3) Ultra-high Refractive Index materials

5. NUMBERS OF PARTICIPANTS

TOTAL: 100 or more persons including 1 or more US and Canada Alumni Association members
-US: 100 or more people
-CANADA: 1 or more people
-FROM OTHER COUNTRIES: several person(s) including 0 person(s) from Japan

NOTES FOR REPORT

*Please be sure to include the following contents. (Maximum **5** pages)

-Executive Summary
-Topics Discussed with Outcomes & Future Challenges
-Workshop/Seminar Agenda
-List of participants

Executive Summary

Professor Iwasawa successfully delivered three technical lectures to three different departments in Southern California over the given time period of award. The nature of the technical lectures focused on ultra-high refractive index materials based on dibenzochrysenes and their syntheses. The seminars focused on different approaches to studying materials starting with large-scale synthesis and efficient methodology development. This approach afforded Professor Iwasawa and his group routes to develop several lines of functional group transformations to give materials with ultra-high refractive index on greater than gram scale. These materials have emerging properties and multiple lines of future exploration are ongoing.

The audiences were comprised of faculty from Chemistry, Biochemistry, Materials and Physics departments along with Post-doc, Ph.D., M.S., and B.S./B.A. candidates. The talks were each preceded by a day of meetings with faculty and students.

These meetings involved numerous discussions of collaborative research opportunities between faculty as well as the continued discussions of providing short-term research opportunities for students in opposite countries.

The current JSPS research offerings were presented by me at UC Riverside and by Ms. Ryoko Yamashita at Long Beach and San Diego. From my interactions with students and faculty, several students at each institution were interested in advanced study in Japan and would be eligible for a variety of JSPS programs. Several students had already traveled to Japan or have Japanese ancestry. At least one faculty member approached me about short-term JSPS awards and would be highly competitive for such an award.

Topics Discussed with Outcomes & Future Challenges

Future collaborations with Prof. Iwasawa and a variety of faculty seem likely. These collaborations will likely take place with both chemistry and physics faculty and students. Several American researchers are specialists in materials characterization and a few have experience in applications of materials.

Some challenges remain to both collaborative research as well as to student exchange. The main challenge to advancing idea exchange remains the cost of housing and transporting researches to opposite countries for periods of 3-6 months. Exchanges of this type would be of much greater impact than simple email collaborations. Simply put - the research enterprise as well as research infrastructure of different universities is simply so different that hands-on training and idea exchange in person remains superior. Student exchange (or PI) offers numerous opportunities for learning techniques as well as having access to different instrumentation and advanced training in a different environment.

Some small discussions about shipping of materials overseas was discussed.

The other major issue that we have encountered is how to provide students research opportunities in foreign countries that align with research objectives and ongoing degree progress. This remains very difficult to solve systematically, but summer research programs (3 months) or winter (1 month) research stays seem more reasonable and not very disruptive to thesis/dissertation progress.

The final and perhaps biggest challenge involves finding students willing to go to a foreign lab for an extended period of time to learn new techniques, and engage in new collaborative endeavors. I feel that student interest in overseas research continues to rise, but barriers and systematic programs (easy) don't yet exist.

Workshop/Seminar Agenda

A typical agenda was as follows: Arrive on Campus and meet with various faculty throughout the day, meet students for lunch, host a technical seminar that focused on Solvent-Alone-Driven Cross-Coupling of Fluorenones for Synthesis of Dibenzo[g,p]chrysenes, with a JSPS information session following.

List of participants

Some 100 or so faculty and students from 3 departments attended the talks.