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# State-of-the-Art Program on Compound Semiconductors 50 (SOTAPOCS 50) -and- Processes at the Semiconductor Solution Interface 3

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## Preface

The 50<sup>th</sup> State-of-the-Art Symposium on Compound Semiconductors was held at the 215<sup>th</sup> meeting of The Electrochemical Society on May 24-29, 2009 in San Francisco, California, USA. The symposium was sponsored by the Electronics and Photonics Division of The Electrochemical Society.

The symposium consisted of four half-day sessions and one poster session on topics relating to materials, processes, and compound semiconductor devices. This symposium has been held biannually since the fall of 1984. Over the years, this symposium has evolved from its inception as a unique forum for presenting processing-related material mostly for GaAs materials to its position today as a wide-ranging forum for research on a wide variety of compound semiconductors of which GaAs, InP, GaN, ZnO, and SiC are today the most prevalent. The special symposium includes invited talks and papers of a historical nature as well as contributed and invited papers on current research topics. This issue of *ECS Transactions* contains 17 of the papers presented, including invited papers by S. J. Pearton (University of Florida), C. Barratt (RF Microdevices), S. F. Yoon (Nanyang Technological University), and K. Smith (Raytheon).

The 3<sup>rd</sup> International Symposium on Processes at the Semiconductor-Solution Interface (PSSI 3) was held at the 215<sup>th</sup> meeting of The Electrochemical Society on May 24-29, 2009 in San Francisco, California, USA. The symposium was sponsored by the Electronics and Photonics Division of The Electrochemical Society.

The symposium covered topics at the forefront of semiconductor electrochemistry and solution-based processing including etching, patterning, passivation, porosity formation, electrochemical film growth, electrophoretic deposition, semiconductor surface functionalization, and other related processes. This issue of *ECST* contains 24 of the papers presented including invited papers by A. Etcheberry and A. Gonçalves (Institut Lavoisier, IREM), J. Stickney (Georgia Tech.), P. Allongue (LPMC - Ecole Polytechnique, CNRS), L. M. Peter (University of Bath), S. Ono (Kogakuin University), K. M. Ryan (University of Limerick), and H. Föll (Christian-Albrechts University Kiel).

This issue of *ECST* continues the PSSI tradition of being published before the meeting. Invited papers are denoted by an asterisk in the table of contents.

The editors gratefully acknowledge the authors for their efforts to submit the manuscripts on time, enabling this issue of *ECS Transactions* to be published before the meeting. We thank the organizers, the speakers, especially the invited speakers, and the session chairpersons for their contributions to the success of the symposia. Finally, we wish to express our appreciation to the staff of The Electrochemical Society for their efforts, which enabled the publication of this volume on a very tight schedule.

A. G. Baca, J. Brown, D. N. Buckley, P. Nam,  
C. O'Dwyer, and A. Etcheberry



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\* *invited paper*



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## Facts about ECS

The Electrochemical Society (ECS) is an international, nonprofit, scientific, educational organization founded for the advancement of the theory and practice of electrochemistry, electrothermics, electronics, and allied subjects. The Society was founded in Philadelphia in 1902 and incorporated in 1930. There are currently over 7,000 scientists and engineers from more than 70 countries who hold individual membership; the Society is also supported by more than 100 corporations through Corporate Memberships.

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