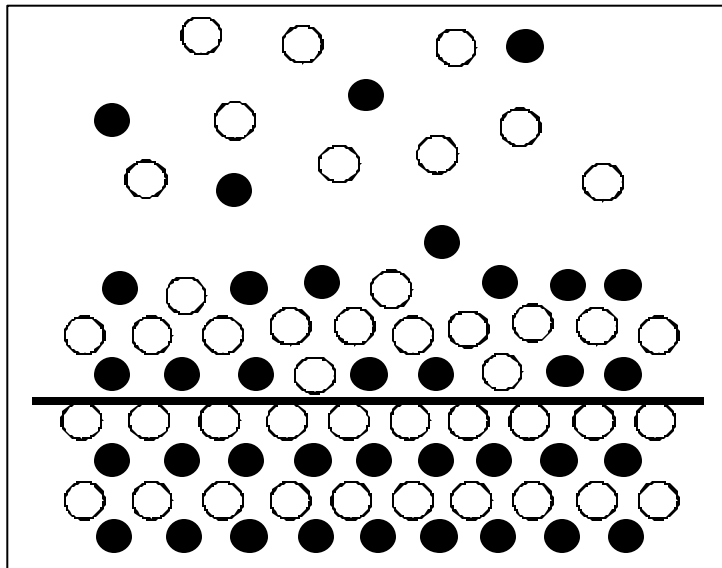


4th Symposium On Non-Stoichiometric III-V Compounds

Program and Travel Information



2nd – 4th October 2002

**Asilomar Conference Grounds
Pacific Grove, California**

PROGRAM

Session 1 Wed 08:30-10:15

(Chair: John Whitaker)

08:30 Welcome to Asilomar

T. R. Weatherford

08:45 Call it Non-Stoichiometric GaAs, not LT GaAs: A Look Back and a Look Forward on this Subject (invited)

G. L. Witt

09:15 Arsenic Interstitials in As-rich GaAs: Can they be Important and if so, When?

C. G. Morgan, J. T. Schick, and P. Papoulias

09:45 Increased Interstitial As Concentration in GaAs Layers Grown at Low Temperature on <111>A Misoriented GaAs(001) Substrate

C. Schuer, T. Riedl, T. Marek, H.P. Strunk and S. Kunsagi-Mate

10:15 coffee break

Session 2 Wed 10:35-12:05

(Chair: Gerald Witt)

10:35 Effects of Stoichiometry on Point Defects and Impurities in GaN (invited)

C.G. Van de Walle

11:05 Arsenic Antisite and Nitrogen Incorporation in GaAsN grown at Low Temperature by Molecular Beam Epitaxy

R. Zhao, J. Gebauer, P. Specht, E. R. Weber

11:35 Vacancies as optically and electrically active defects in III-nitrides and III-arsenides (invited)

K. Saarinen

12:05 lunch break – Crocker Dining Hall

Session 3 Wed 13:30-15:30

(Chair: Takashi Inushima)

13:30 Defect Structure of GaN Epilayers: M-plane versus C-plane growth (invited)

A. Trampert

14:00 Characteristics of III-Nitride Films Grown by Electron Cyclotron Resonance Plasma-Assisted MBE and its Stoichiometric Control under plasma growth process (invited)

T. Yodo

14:30 Role of Carbon in Silicon-doped GaN Grown by Metalorganic Chemical Vapor Deposition

C.H. Seager, A.F. Wright, W. Goetz, T. Mihopoulos, J. Yu

15:00 Influence of Carbon Doping on the Optical and Electrical Properties of MBE

GaN Grown on MOVPE-GaN / Sapphire Templates

R. Armitage, Q. Yang, H. Feick, and E.R. Weber

15:30 coffee break

Session 4 Wed 15:50-17:20

(Chair: Christian Kisielowski)

15:50 Mechanism of Laser Lift-off in GaN

E.A. Stach, J. Schroeder, Y. Cho and T. Sands and W.S. Wong

16:20 Growth of Thin Oriented Gallium Nitride Films on Amorphous Substrates Using Self-Assembly

M.K. Sunkara and H. Li

16:50 Superconducting Characteristics of InN Grown on Sapphire (0001) (invited)

T. Inushima, S. Takenobu, M. Motokawa, A. Yamamoto, Y. Saitoh, Y. Nanishi

18:30 Social Event on Cannery Row at the Culinary Center of Monterey.

Session 5 Thu 08:15-10:15

(Chair: Wolfgang Jaeger)

08:15 On the Feasibility to Investigate Point Defects by Advanced Electron Microscopy (invited)

C. Kisielowski

08:45 Non-Stoichiometry at Threading Dislocations in GaN

I. Arslan, N.D. Browning

09:15 Comparison of Al_xGa_{1-x}N Films Grown on Sapphire by MBE under N-rich and Metal-rich Conditions

J. Jasinski, Z. Liliental-Weber, L. He, M. A. Reshchikov, H. Morkoç

09:45 Quantitative Determination of the Kinetics of Nanopipe Growth in GaN (invited)

E.A. Stach, W.S. Wong, M. Kneissl

10:15 coffee break

Session 6 Thu 10:35-12:05

(Chair: Chris Van de Walle)

10:35 Photoconductivity of GaN Thin Layers

A. Castaldini, A. Cavallini, L. Polenta

11:05 Doping and Deep Level Defects in High Al Content AlGa_N

S.T. Bradley, P.E. Smith, L.J. Brillson, W.J. Schaff

11:35 Low Frequency Noise Characterization of Semiconductors (invited)

M.J. Cich, S.Y. Tzeng, and E. R. Weber

12:05 lunch break – Crocker Dining Hall

Session 7 Thu 13:30-15:30

(Chair: Peter Kiesel)

13:30 Dopant Induced Non-Stoichiometry Effects in III-V Semiconductors (invited)

W. Jaeger, C. Jaeger

14:00 Highly Doped n-LT-(Al)GaAs Layers

S. Malzer, C. Steen and G.H. Döhler

14:30 The Role of Non-Stoichiometric III-Vs in Radiation Hardened Devices

T. R. Weatherford, Q. Yang, E.R. Weber

15:00 Nuclear Radiation Effects on GaAs and GaN Thin Films and Devices (invited)

S.M. Khanna

15:30 coffee break

Plenary Discussion Thu 16:00-17:00

“Future Stoichiometry-Related Research Goals for III-Nitrides: Engineering Useful Defects”

Harry Dietrich, Office of Naval Research

Karen Moore, Motorola Labs

Eicke R. Weber, University of California, Berkeley

18:00 Outside BBQ dinner near the beach boardwalk and the Crocker Dining Hall

Session 8 Fri 08:15-09:45

(Chair: Mike Cich)

08:15 A Standard Low-Temperature GaAs Growth: Prerequisite for Defect Engineering

P. Specht, R. Zhao, J. Gebauer, E.R. Weber

08:45 Study of Electron and Hole Emission of Deep Defect Centers in Low Temperature Grown GaAs

C. Steen, P. Kiesel, M. Öchsner, V. Donchev, S. Malzer, and G. H. Döhler

09:15 Freestanding LT GaAs as a Subpicosecond Photoconductive Switch and High-Voltage Photomixer

M. Mikulics, F. Siebel, X. Zheng, R. Adam, M. Marso, H. Stüer, R. Sobolewski, R. Güsten, P. Kordoš

09:45 coffee break

Session 9 Fri 10:05-11:50

(Chair: Todd Weatherford)

10:05 Ultrafast and Wideband Response of Optical Saturable Absorption in LT-Grown and Be-Doped GaAs (invited)

T. Okuno and Y. Masumoto, S. Kadono, S. Kitade, H. Bando and H. Okamoto

10:35 Highly N-doped LT-GaAs and ErAs Recombination Layers Used in NIPNIP THz-Photomixers

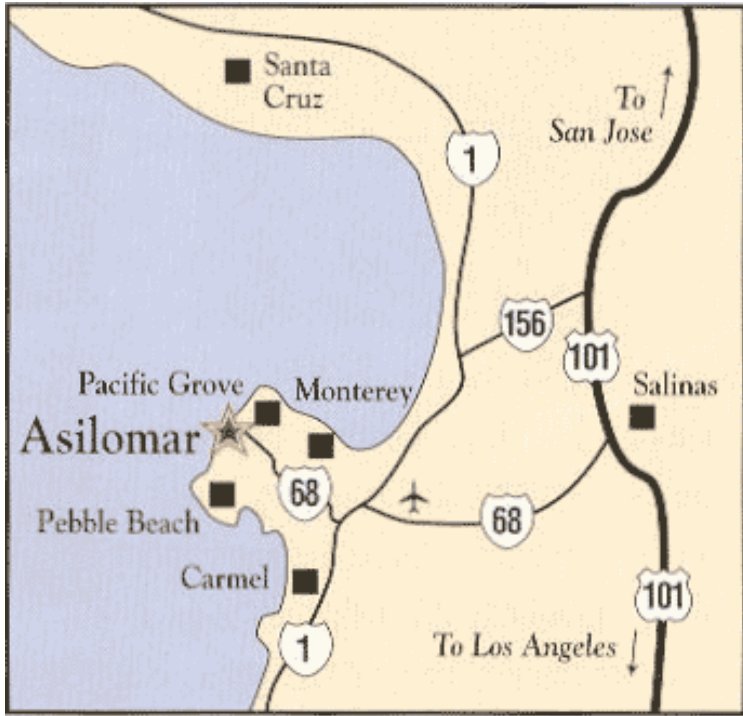
F. Renner, M. Eckardt, A. Schwanhäußer, L. Robledo, A. Friedrich, P. Pohl, P. Kiesel, S. Malzer, D. Driscoll, M. Hanson, A.C. Gossard, G.H. Döhler

11:05 Experimental evidence of the Minority Carrier Extraction at the Bulk Semi-Insulating GaAs / As-Implanted and LT MBE GaAs Interface

F. Dubecký, B. Zlatko, C. Ferrari, C. Frigeri, P. Hubík, J. Krištofík, A. Förster, P. Kordoš

11:35 Closing Remarks -Petra Specht

11:50 lunch break – Crocker Dining Hall



From San Francisco, Take US101 south to CA156 to Monterey Peninsula. CA156 joins US 1 south in 5 miles. Continue on US 1 south, take CA 68 to Pacific Grove, Pebble Beach exit. Turn right, follow CA 68 for 2 miles into Pacific Grove, and take left onto Sunset Drive. 1 mile turn right onto Asilomar Blvd, then 2nd left into main entrance for Asilomar conference grounds. Straight ahead (building with bicycle racks) is the Main Lodge, parking is available at back of building.

From Monterey Airport. Exit Airport, at light turn right onto CA 68, in 1 mile, take left fork of CA68 to join with US 1 south. In 2 miles take CA 68 to Pacific Grove, Pebble Beach exit . Turn right, follow CA 68

for 2 miles into Pacific Grove, take left onto Sunset Drive. 1 mile turn right onto Asilomar Blvd, then 2nd left into main entrance for Asilomar conference grounds. Straight ahead (building with bicycle racks) is the Main Lodge, parking is available at back of building.



Please see website for additional information and maps.

Conference Location

The “4th Symposium on Non-Stoichiometric III-V Compounds” will be held at the Asilomar Conference Grounds, Pacific Grove, CA. Pacific Grove is located near, Pebble Beach, Carmel and Monterey, CA on the Monterey Peninsula. The conference grounds are adjacent to the Pacific Ocean providing beautiful sunsets.

800 Asilomar Blvd.
Pacific Grove, CA 93950, USA
Phone: (+1)-831-372-8016
FAX: (+1)-831-372-7227

Travel Information

The Asilomar Conference Grounds is 5 miles west of the Monterey airport and can be easily reached by car or public transportation. Upon request, a shuttle service will be provided to and from this airport. Connecting flights to Monterey are available via San Francisco, Los Angeles or Phoenix. Driving from San Francisco is about 2 ½ to 3 driving hours (105 miles) north of Monterey/Pacific Grove. Airports in San Jose (70 miles) and Oakland (95 miles) are also available. Detailed driving instructions and general information about public transport can be obtained through our website.

Weather

Early October is the driest and warmest season on the Monterey Peninsula. Average temperatures range from morning lows of 45°F (7°C) to highs near 65°F (18°C) in the afternoon. Expect no precipitation, but heavy morning fog is common in early October. Water temperature is near 55°F (12°C).

Visa and Health Insurance

Valid passports are required for all foreign participants. Participants who are required to have a visa for entering the USA are recommended to apply at the nearest US embassy in their countries as soon as possible. The organizer will be pleased to issue a personal invitation to any participant upon request. The invitation is made only to help the participant obtaining the visa and to expedite bureaucratic procedures. Registration does not include health insurance. International participants may want to acquire a separate personal health insurance valid for foreign travel.

Registration

Please do not contact the Asilomar conference grounds regarding your registration or housing requests. All requests should be sent directly to the conference organizers listed in this booklet. Thank you.

The registration fee shall be paid to “**IEEE Monterey Bay Subsection**” with a US bank check by September 6, 2002 and sent to the symposium co-chair.

Prof. Todd Weatherford
Non-Stoichiometry Symposium
Naval Postgraduate School
833 Dyer Road, Rm 437
Monterey, CA 93943-5121, USA

Make sure that your **name** is clearly stated on the check. Otherwise your registration cannot be identified properly.

Registration fee is:

US\$ 150.00 for regular participants
 US\$ 75.00 for students (with valid ID)
 US\$ 50.00 for accompanying persons.

For late registration at the symposium the fee will be **US\$ 180.00 / US\$ 100.00 / US\$ 65.00** (cash or US Bank check). Student registration will include a one year IEEE student Membership.

The fee covers the Welcome Reception Tuesday evening, the social event on Cannery Row, refreshments during the breaks, the abstract book, and the proceedings. Accompanying person fees cover the reception and the social event.

The conference registration and information desk will be located at the Asilomar Main Lodge (Front Desk) and will be open:

- Tuesday evening at 5.30 pm (17:30 h)
- Wednesday and Thursday at 7.45 am (7:45 h)

It will remain open during the day until half an hour after the last session of each day has finished.

Oral Presentations

For all oral contributions, 20 minutes followed by 10 minutes of discussion are allocated.

Contributions to the Symposium Proceedings

You are requested to deliver a camera-ready version of your contribution (maximum length 6 pages) to the symposium. The proceedings of the symposium will be published in the series “Physics of Microstructured Semiconductors“. Guidelines for preparing this manuscript are found on our symposium web page.

Accommodations

A number of rooms have been reserved at the Asilomar Conference Grounds. A small number of historic style rooms are available, most rooms are standard (or deluxe) style. Room rates include three meals a day per person starting with the evening meal upon your arrival and first night at the conference grounds and ending with the lunch meal before you depart. Please see below the room rates per person dependent on the number of occupants and room style. Note, rooms do not have telephone or TV. Pay phones are available nearby. Asilomar will not process room reservations or registration requests. The symposium handles assignments.

Occupancy:	single	double	triple or more
Historic style	\$ 132.35	\$ 86.68	\$ 68.51
Standard style	\$ 162.06	\$ 97.68	\$ 77.32

Special needs: Please indicate on your registration if you need a room with access for wheelchairs, a child crib, vegetarian meals or any other special needs you might have.

Further Questions? / Website / Contacts

For the latest information please visit the website at:

www.mse.berkeley.edu/non-stoi/home.html

For any further questions concerning registration, paper preparation and accommodation, please contact us at: **nonstoi@uclink.berkeley.edu** or direct your questions to one of the organizers:

Organization

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Financial Support

The IEEE Monterey Bay Subsection of the IEEE Santa Clara Valley Section (Silicon Valley) is hosting the symposium. We greatly acknowledge financial support from the Air Force Office of Scientific Research, AFOSR and the Office of Naval Research, ONR.