

Photo Chemical Machining Institute



Fall International Conference
Pan Pacific Orchard Hotel, Singapore
October 3 - 7, 2010



The Photo Chemical Machining Institute (PCMI) is in its final stages of planning the 2010 Fall International Conference to be held at the Pan Pacific-Orchard Hotel in Singapore.

If you have not already started to make your plans to attend, the time is now.

The conference will cover many subjects in the field of resist, ink-jet printing, exposure, chemicals, R&D and equipment. In addition, presentations will be made on PCM industry trends and etching from the customer's prospective. Plus, PCMI will conduct a post-conference plant tour and a PCM Short Course. This year the Conference will offer a unique opportunity for attendees to talk amongst themselves about PCMI services and benefits and what they want from future educational programs.

Don't miss this opportunity to visit [Singapore](#).

It is truly cosmopolitan, with a fascinating mixture of people and culture: Officially Chinese, Indian and Malay, but also with a huge foreign resident and transit population of Americans, Burmese, Europeans, Indonesians, Japanese and fellow Asians, making it one of the most diverse centers in Asia. Singapore is in fact one of the most enjoyable cities in Southeast Asia.

To reserve your room at the Pan Pacific Orchard Hotel, you can use the attached form or go to www.panpacific.com. The Room Reservation Form should be completed and either Fax'd to +65 6831 6682, or e-mailed to reserve.sgo@panpacific.com. A confirmation will be sent directly to you from the hotel.

**Hotel reservation deadline is
September 1, 2010.**



Photo Chemical Machining Institute Sponsorship Opportunity

Fall Conference • October 3 - 7, 2010 • Pan Pacific Orchard Hotel • Singapore

PCMI Sponsorship - It's Good For Business!



Vendors can demonstrate their support for PCMI and increase their visibility in the industry by becoming a PCMI Conference Sponsor.

Platinum Sponsor **\$1,000**
Sponsors for Technical Sessions or Cocktail Reception

Gold Sponsor **\$750**
Sponsors for PCMI Banquet Dinner Wine

Silver Sponsor **\$500**
Sponsors for PCMI Lunch and Breaks.

Bronze Sponsor **\$300**
Sponsors for PCMI Registration.

Why Be a Sponsor?

- ✓ *To support PCMI in its efforts to service and provide benefits to the photo chemical machining industry through education, publications, technical information and assistance, networking, mentoring, business referrals and industry trends;*
- ✓ *To have the opportunity to promote your company's products or services during the conference at a tabletop display;*
- ✓ *To gain access to key photo chemical machining industry leaders at one time and in one place;*
- ✓ *To have your company name on the PCMI website front page, linked to your company website;*
- ✓ *To obtain special recognition during the conference, in the marketing materials and in the Program Booklet.*



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Agenda

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Sunday, October 3, 2010

Technical Sessions Platinum Sponsor

9:00 am - 4:00 pm PCMI Board of Directors Meeting



Monday, October 4, 2010

- 8:30 am - 9:00 am Registration
- 9:00 am - 9:30 am Welcome and Introductions
Presented by: Gerald Williams, United Western Enterprises, US,
PCMI President
- 9:30 am - 10:15 am "The Sense of Innovation"
Presented by: Harrie Knol, Stork Veco, NL
- 10:15 am - 11:00 am "Study on Electrolytic Photo Etching of Molybdenum Grids by the
Taguchi Method"
Presented by: Professor Harry Wang, Nanjing University of Aeronautics/
Astronautics, CN and

Professor David Allen, Cranfield University, UK
- 11:00 am - 11:15 am Refreshment and Networking Break
- 11:15 am - 12:00 pm "An Overview of the PCM Market in India with Focus on Product Costs, the
role for Ravi - Raj Anodisers, and an Overview of Maharashtra State, the
"Detroit of the East."
Presented by: Ravindra Yawalkar, Ravi-Raj Anodisers, IN
- 12:00 pm - 1:00 pm Lunch
- 1:00 pm - 2:15 pm "PCM Industry Trends"
Presented by: Joe Beck, Director of Technical Services & Business
Development, Chemart Company, US
- 2:15 pm - 3:00 pm TBD
- 3:00 pm - 3:15 pm Refreshment and Networking Break
- 3:15 pm - 4:00 pm "Improving Yields and Shortening Lead-Time with Digital Solutions"
Presented by: Eitan Judah, Business Manager, Orbotech Ltd., IL



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4:00 pm - 4:45 pm "Business Trends in Asia and the Impact on the West"
Presented by: TBD

4:45 pm - 5:00 pm Closing General Session

6:30 pm - 7:30 pm Cocktail Reception

7:30 pm - 9:00 pm Banquet -- Dinner Wine Sponsored by:



Tuesday, October 5, 2010

8:30 am - 9:00 am Registration

9:00 am - 9:30 am Introductory Remarks & Finance Report
Presented by: William Fox, President, The Conard Corp., US,
PCMI Treasurer

9:30 am - 10:15 am "Micro- and Bio- Engineering Applications for Etched Magnesium Parts"
Presented by: Professor David Allen, Cranfield University, UK

10:15 am - 11:00 am "Customer's Point of View", Part Two
Presented by: Joe Beck, Director of Technical Services & Business
Development, Chemart Company, US

11:00 am - 11:15 am Refreshment and Networking Break

11:15 am - 12:00 pm "Manufacturing Technology For Polymer-Based Microfluidics"
Presented by: Dr. Wang Zhiping, Manager of SIMTech Microfluidic
Manufacturing Programme, Singapore Institute of Manufacturing
Technology

12:00 pm - 1:00 pm Lunch

1:00 pm - 2:15 pm "Value Added Processing by Schmid—Design Engineering Possibilities"
Presented by: Laurent Nicolet, President, Gebr. Schmid Gmbh + Co., DE

2:15 pm - 3:00 pm "Topic TBD"
Presented by: Professor Agrawal Devendra Prabhudayal, College of
Engineering, IN

3:00 pm - 3:15 pm Refreshment and Networking Break



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- 3:15 pm - 4:00 pm "Etching -- What the Future Holds" Panel Discussion
Moderated by: Prof. David Allen, Cranfield University, UK
- Panelists: William Fox, The Conard Corp. US
Michael Lynch, VP, Operations United Western Enterprises, US
Anthony Marrett, Precision Micro, UK
Heimeran von Stauffenberg, Metaq GmbH, DE
Professor Harry Wang, Nanjing University of Aeronautics/
Astronautics, CN
- 4:00 pm - 4:45 pm Informational Planning Exchange
Presented by PCMI Board of Directors working with all attendees.
- 4:45 pm - 5:00 pm Closing General Session
- Evening with your PCMI colleagues

Wednesday, October 6, 2010

- 9:30 am - 11:00 am Tour of Singapore Institute of Manufacturing Technology
71 Nanyang Drive, SG 638075
- 11:00 am - 12:00 pm Lecture at Singapore Institute of Manufacturing Technology
Auditorium
- "Developments in manufacturing three-dimensional microparts".
Presented by: Professor David Allen, Cranfield University, UK
- 12:00 pm - 1:30 pm Lunch/Travel to Datum Alloys
- 1:30 pm - 2:00 pm Tour of Datum Alloys
Blk 8, Lorang Bakar Batu
01-09 Kolam Ayer Industrial Estate, SG

Thursday, October 7, 2010

- 9:00 am - 4:30 pm "Photochemical Machining: What it is and How to Control it"
at Nanyang Polytechnic, Singapore
Presented by Professor David Allen, Cranfield University, UK



Photo Chemical Machining Institute

Short Course

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"Photochemical Machining: What it is and how to control it"

Presented by Professor David Allen,
Professor of Microengineering, Cranfield University, UK

at
Nanyang Polytechnic, Singapore
on
Thursday October 7th, 2010

Syllabus

The Photochemical Machining (PCM) process is a multi-stage process involving photoresist imaging and chemical etching technology that requires strict control at all stages for the manufacturing of high quality products at competitive prices. The course considers the vast product range and the metals, photoresists and etchants used. Particular attention is paid to quality control of ferric chloride and cupric chloride etchants and the industrial etchant regeneration methods used to reduce process costs and comply with environmental legislation.

Language: The Short Course will be conducted in English but there will be some provision for English/Mandarin translation.

Lecture room location: Lecture room details will follow delegate registration via PCMI.

Fees: Fees are payable via PCMI.

Members and First Time Attendees	US \$500.00
Non Members	US \$800.00

Schedule for Thursday October 7th 2010

0900-1030

Introduction to PCM, ferric chloride, cupric chloride and the role of photoresists

1030-1100

Coffee break

1100-1230

Ferric chloride etchant and how to monitor it

1230-1330

Luncheon

1330-1500

Environmental control and ferric chloride and cupric chloride regeneration

1500-1530

Tea break

1530-1630

Round table session for individual questions, summary and close

REGISTRATION FORM



PCMI 2010 FALL INTERNATIONAL CONFERENCE
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<u>Fee Schedule</u>	<u>PCMI Member</u>	<u>NON-Member 1st Meeting</u>	<u>NON-Member</u>	<u>Amount</u>
Meeting Registration <i>Conference fees include breaks and lunch daily.</i>	US \$450.00	US \$450.00	US \$1,100.00	\$ _____
PCMI Banquet	US \$75.00	US \$75.00	US \$125.00	\$ _____
PCM Short Course	US \$500.00	US \$500.00	US \$800.00	\$ _____
Post-Conference Plant Tour TBA -- <i>Transportation</i>	US \$25.00	US \$25.00	US \$50.00	\$ _____
Sponsorship	<input type="checkbox"/> Platinum - US \$1,000.00	<input type="checkbox"/> Gold - US \$750.00		\$ _____
	<input type="checkbox"/> Silver - US \$500.00	<input type="checkbox"/> Bronze - US \$300.00		
			TOTAL FEE:	\$ _____

Name: _____ Name for Badge _____
 Spouse Name _____ Spouse Name for Badge _____
 E-mail address: _____ Is this your first PCMI Conference? Yes No
 Company/Institution: _____
 Address: _____ City: _____ State: _____ Zip: _____ Country: _____
 Telephone: _____ Fax: _____

Payment: A check for US \$ _____, payable to the PCMI, is enclosed (U.S. bank checks only.)

Please charge US \$ _____ to my credit card:



Credit Card # _____

Please print clearly!

Exp. Date: _____ / _____ Security # _____

We hope all meeting attendees will consider taking advantage of the benefits of PCMI membership, including reduced conference fees and access to technical materials and literature.

Please return registration form and payment by **September 1, 2010** to:

Contact PCMI • Catherine Flaherty, Executive Director
 11 Robert Toner Blvd., # 234 • North Attleboro, MA 02763 USA
 Phone: (508) 385-0085 • Fax: (508) 232-6005 • cflaherty@pcmi.org

To: Reservations Department
Pan Pacific Orchard
10 Claymore Road, Singapore 229540
Email: anne.seah@pphg.com

Tel: (65) 6831 6626 / 6627
Fax: (65) 6831 6682
Email: reserve.sgo@panpacific.com



ROOM RESERVATION FORM
PCMI 2010 FALL CONFERENCE (2-7 Oct 2010)

To register online go to: www.panpacific.com The code is 131010PCMI. [Click here for online instructions.](#)

Single room – S \$290 (US \$209) per room per night, including breakfast and in-room broadband.
Double room – S \$310 (US \$223.50) per room per night, including breakfast and in-room broadband.

All hotel charges are subject to 10% tax and service charge.

Please reserve _____ room (s) under my name:

Name: _____ (in block & underline family name)

Name of Sharer: _____

Address: _____

Telephone: _____ Fax: _____ Email: _____

Date of Arrival: _____ Flt/Time: _____

Date of Departure: _____ Flt/Time: _____

Premium Deluxe Room (35 sqm)

Type of Bed: King Twin Smoking Non-smoking

Other special requests: _____

*Note: Rooms/room types will be subject to availability at time of reservation.

To guarantee the room (s), details of my credit/charge card are as follows:

Visa Master Diners Amex JCB

Name of Card Holder: _____

Card Number: _____ Exp. Date: _____

I agree to the following terms & conditions:

Cancellation received after 48 hours prior to date of arrival, a one-night room charge will be billed to my credit card.

Signature: _____ Date: _____

Confirmed by PAN PACIFIC ORCHARD:

Confirmation Number: _____