

Newsletter of the APS Shock Compression of Condensed Matter Topical Group

Welcome to the eighth issue of the American Physical Society Shock Compression of Condensed Matter Topical Group Newsletter. This quarterly newsletter includes conference announcements, job advertisements, profiles of award winners, obituaries, and articles on the history of the field from the membership. Issues have a revolving Lead Editor, with the current issue being compiled by Dr. Jennifer Jordan. Past issues can be found on the GSCCM website <http://www.shockphysics.org/>. Dr. William Proud will serve as the Lead Editor for the next issue, please email him comments and contributions to at wgp1000@hermes.cam.ac.uk.

Letter from the Chair

Believe it not, the 16th International Conference of the APS Topical Group on Shock Compression of Condensed Matter is just around the corner. I hope you all have been brushing up on your country music as we prepare to descend upon Nashville, TN... This promises to be an exciting meeting, with well over 500 submissions (oral and poster presentations), and an impressive venue. Be sure to thank the organizers of this year's meeting; Bill Proud, Mike Furnish, and Bill Anderson.

I want to highlight the efforts of Kathy Prestridge, Dana Dattelbaum, and Dave Moore in organizing the student outreach program for this meeting. Thanks to their efforts we will be sponsoring 27 students, hosting a student breakfast on Thursday morning, and for the first time recognizing students for outstanding research.

I also want to draw you attention to the Town Hall meeting, scheduled at 5:30-6:30 pm on Tuesday in The Tennessee C Ballroom. We've decided to experiment with the format somewhat by kicking off discussions with short presentations on research areas relevant to the Topical Group. The topics will include space research, introduced by Dr. Shannon Ryan, nanotechnology, introduced by Prof. K.T. Ramesh, and compression tools, introduced by Dr. Dave Funk. Please consider attending this Town Hall meeting and contributing to its success.

Finally, please consider attending the annual business meeting of the Topical Group. The meeting is currently scheduled for Thursday afternoon in the Cheekwood GH conference room, beginning at 12:30 or 12:50 pm (be sure to check the program and notices at the meeting). We welcome your comments and input regarding the vision of the Topical Group.

See you all in Nashville,
Marcus Knudson

Topical Group Membership

David Moore and several other volunteers will be stationed at the APS and Topical Group membership booth at the SCCM09, and will have APS goodies to hand out to folks considering APS membership and/or Topical Group membership. David would greatly appreciate present Topical Group members acting as recruiters during the SCCM09 conference, by sending member possibilities to the booth. APS members can join the Topical Group on line at <http://aps.org/membership/units/join-unit.cfm>.

Topical Group membership costs very little (incrementally) and adds a lot of value. There are many reasons to become a Topical Group member, the most significant of which (for the other topical group members because of the minimum allowable size for existence of a Topical Group) is that the Topical Group is allowed to hold a biennial Topical Group Conference with APS support. The APS web site adds: As part of a Society committed to member participation, Topical Groups provide opportunities for members to interact with colleagues with similar interests and to keep abreast of new developments in their specialized fields.

Obituary
Professor Malcolm Nicol



Professor Malcolm Nicol, a well-known physical chemist and a long-time APS fellow, passed away on May 7, 2009. This is a significant loss to the high pressure community as he was a great supporter of the APS-SCCM Topical Group and the AIRAPT, serving many terms as chair for the Shock Wave Award Committee and treasurer for the AIRAPT.

Malcolm Nicol earned his Ph.D. in Chemistry in 1963 at the University of California, Berkeley and was a professor at the University of California, Los Angeles until 1999. Since then, he was a faculty of the University of Nevada, Las Vegas. Most recently, he was the director of the High Pressure Science and Engineering Center at UNLV.

Over the fifty years of his career, Professor Nicol played a significant role in advancing physical science and shaping high pressure research. He was the first to introduce Raman spectroscopy into high-pressure fields in the late 1960s, made significant contributions to establishing the oxygen phase diagram, and pioneered high-pressure chemistry in both static and shock conditions. He was also a founding member of several high-pressure synchrotron beamlines at SSRL and APS, where he brought scientists in many different research fields from both academia and DOE national laboratories.

To those of us in high pressure community, Malcolm was known for his warm and kind personality. He was always ready to offer his valuable insights in scientific matters and beyond. To me, he was a great teacher, long-time colleague, and very dear friend, who greatly helped establish my career in US. We will all sorely miss his great smile and sparkling scientific insights.

-- Dr. Choong-Sik Yoo, Washington State University

REPORTS ON CONFERENCES OF INTEREST

**2009 APS Shock Compression of
Condensed Matter**

This Conference is June 28 - July 3 at the Gaylord Opryland Hotel, Nashville, TN and is chaired by William Anderson (LANL), Michael Furnish (SNL) and William Proud (University of Cambridge). In addition to the traditional topical areas, this Conference will include ballistics, dynamic behavior of nano/bio materials, and particulate mechanics. An interesting social and companion program has been laid out to allow an opportunity for conferees to reacquaint themselves with colleagues in the community and for companions to enjoy highlights of the Nashville area. The 12th recipient of the George Duvall Shock Compression Science Award, Don Curran, will present a keynote address.

TOWN HALL MEETING

This event will take place Tuesday evening, June 30, from 1730 to 1830 in the Tennessee Ballroom C, and will be chaired by Jon Eggert of Lawrence Livermore National Laboratories. Following suggestions raised by members of the Shock Compression of Condensed Matter Group, the TOWN HALL meeting at the SCCM 2009 Conference will take the following format:

Up to four short presentations (5-10 minutes each) will be made covering research areas relevant to the GSCCM. The aim of each presentation will be to present the most significant challenges for researchers in that area. After each presentation there will be an open discussion on the issues raised. In order to capture the main points of each discussion, each presenter will submit a short statement of their main points for inclusion BOTH in the conference proceedings AND on the conference website. Questions, responses, viewpoints from the audience will also be recorded.

At the SCCM 2009 these topics will be (a) SPACE Research - introduced by Dr. Shannon Ryan (b) NANOTECHNOLOGY - introduced by Prof K.T. Ramesh (c) Compression Tools - introduced by Dr. Dave Funk and, if time permits, TEMPERATURE Measurement.

COMPANY SHOWCASE

Sunday, June 28 - Wednesday, July 1 in Tennessee Lobby
Companies include: Cooke Corporation, Cordin Scientific Imaging, Hadland Imaging, Photo-Sonics, Third Millenium Engineering, Thiot Ingenierie, Valyn VIP, and Vision Research.

Workshop on Theoretical and Experimental Approaches for Dynamic Industrial Processes

Madrid, Spain
June 24-26, 2009
<http://turan.uc3m.es/uc3m/dpto/IN/workshop2009/workshop2009.html>

27th International Symposium on Shock Waves

St. Petersburg, Russia
July 19-24, 2009
<http://www.ioffe.ru/ISSW27/>

THERMEC'2009

Berlin, Germany
August 25 – 29, 2009
The meeting will feature a symposium on Dynamic Behavior of Materials.
<http://thermec.uow.edu.au>

9th International DYMAT Conference on the Mechanical and Physical Behaviour of Materials under Dynamic Loading

Royal Military Academy, Brussels, Belgium
September 7-11, 2009
<http://www.dymat2009.org>

The 8th International Conference on Fracture and Damage Mechanics (FDM09)

Malta
September 8-10, 2009
<http://fdm.engineeringconferences.net/>

FRAGBLAST 9

9th International Symposium on Rock Fragmentation by Blasting,
Granada, Spain
September 13-17, 2009
<http://www.fragblast.org/index.asp>

2009 International Autumn Seminar on Propellants, Explosives and Pyrotechnics

Kunming, Yunnan, China
September 22-25, 2009
<http://www.iaspep.com.cn>

8th International Symposium on Special Topics in Chemical Propulsion

Advancements in Energetic Materials and Chemical Propulsion
Cape Town, South Africa
November 2-6, 2009
<http://www.sun.ac.za/8-ISICP>

Hypervelocity Impact Symposium

Freiburg im Breisgau, Germany
April 11-15, 2010
Abstracts Due: June 15, 2009
<http://www.HVIS.org>

15th International Symposium on Electromagnetic Launch Technology

Royal Military Academy, Brussels, Belgium
May 17-20, 2010
Abstracts Due: July 10, 2009
www.emlsymposium.org

The 14th International Detonation Symposium

Coeur d'Alene Resort, Coeur d'Alene, Idaho
April 11 - 16, 2010
Abstracts Due: October 9, 2009
<http://www.intdetsymp.org/detsymp2010>.

Recent / Upcoming Publications of Interest

Antiterrorism and Homeland Defense Polymers and Materials

Ed. John G. Reynolds and Glenn E. Lawson
American Chemical Society Publication 980

Chemistry and Physics of Mechanical Hardness

John J. Gilman
John Wiley & Sons

Dynamic Behavior of Materials (Proceedings of a Workshop in Memory of Prof. J.R. Klepaczko)

Ed. A. Rusinek and P. Chevrier
University of Metz, France
For copies contact: ludmann@enim.fr

Fast Reactions in Energetic Materials: High-Temperature Decomposition of Rocket Propellants and Explosives

Alexander S. Shteinberg
Springer

Image Correlation for Shape, Motion and Deformation Measurement: Basic Concepts, Theory and Applications

Michael A. Sutton, Jean-Jose Orteu, and Hubert Schreier
Springer

International Journal of Plasticity

Special Issue in Honor of Dattatraya (Datta) Dandekar
Volume 25, Issue 4
Ed. James Asay and Tracy Vogler

Proceedings of the Conference on Security and Use of Innovative Technologies Against Terrorism

Ed. F. Teixeira Dias, et al.
University of Aveiro, Portugal

Shock Wave Science and Technology Reference Library Volume 4: Heterogeneous Detonation

Ed. F. Zhang
Springer

Shock Waves: 26th International Symposium on Shock Waves

Ed. Klaus Hannemann and Friedrich Seiler
Springer

Static Compression of Energetic Materials

Ed. Suhithi M. Peiris and Gasper J. Piermarini
Springer

Structural Ceramics: Fundamentals and Case Studies

Frank Riley
Cambridge University Press

A special thanks to Steven Walley for suggesting recent book selections!

Job Opportunities:

Please submit job openings for future newsletters.

Goods and Services

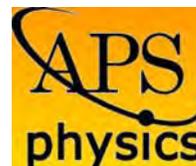
“Goods and Services” is a new section of the newsletter. Guidelines are as follows:

1. Companies may submit one blurb (limit 50 words) per year. Please include an appropriate web or email address.
2. This information is provided as a service to the group members. It does not imply an endorsement by APS, the GSCCM, or any members of the topical group.
3. The newsletter staff reserves the right not to publish submissions if they are inappropriate or not relevant to the audience.

Stephen Walley at Cambridge University has compiled extensive bibliographic databases using 'Endnote' on shock loading and high rate properties of materials. If you are interested, please email him at: smw14@cam.ac.uk Due to the time and labor that has

gone into compiling them, a charge will be made proportional to the total size of the databases you are interested in.

New Supplier of Photonic Doppler Velocimeters - Third Millennium Engineering of Plano, Texas is now offering PDV units for purchase. See "ModBlocks" section at www.tmeplano.com.



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This document was prepared as a service to the Topical Group on Shock Compression of Condensed Matter (TGSCCM) community. The opinions of the contributors expressed herein do not necessarily state or reflect those of the American Physical Society and shall not be used for advertising or product endorsement purposes.

Thanks to all who contributed to this Newsletter. Please send any information for the next newsletter to Dr. William Proud at wgp1000@hermes.cam.ac.uk.

Jennifer L. Jordan
Edition Editor