Complex Mediums III: Beyond Linear Isotropic Dielectrics (am210)

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Conference Chairs: Akhlesh Lakhtakia, The Pennsylvania State Univ.; Graeme Dewar, Univ. of North Dakota; Martin W. McCall, Imperial College of Science, Technology, & Medicine (UK)

Program Committee: John M. Arnold, Univ. of Glasgow (UK); Toru Asahi, Waseda Univ. (Japan); Partha P. Banerjee, Univ. of Dayton; Allan D. Boardman, Univ. of Salford (UK); Mary H. Boghosian, Jet Propulsion Lab.; Brian Fishbine, Los Alamos National Lab.; Ian J. Hodgkinson, Univ. of Otago (New Zealand); Dikshitulu K. Kalluri, Univ. of Massachusetts/Lowell; Clive A. Randall, The Pennsylvania State Univ.; Andrey K. Sarychev, New Mexico State Univ.; Walid Tabbara, Supelco (France); Vijayakumar C. Venugopal, Lam Research Corp.; Peidong Yang, Univ. of California/Berkeley

Scientific and technological progress during the second half of the 20th century has been dominated by the conceptualization, characterization, fabrication, and application of many different classes of materials. Although some of these materials are found in nature, laboratory processing is often needed for efficient use. Others are entirely synthetic, created by chemical and physical processes. Certain materials are multi-phase composites designed for certain desirable response properties otherwise unavailable. Multi-functional materials as well as functional gradient materials are often needed for special purposes. Nanostructural engineering is often used to make material samples with the same chemical composition but different response characteristics.

The COMPLEX MEDIUMS series of conferences provides a forum for scientists and engineers, specializing in one or several classes of complex mediums, to benefit from each other's specialized knowledge. A major aim is the creation of interdisciplinary links among trend setting specialists in diverse fields. Please visit the bulletin board Complex Mediums (http://www.yahoogroups.com/group/ComplexMediums).

H. John Caulfield, a past-President of SPIE has consented to deliver the Inaugural Lecture – on optical applications of spatially randomized materials.

The following specialists have agreed to deliver Critical Review Lectures: David Andrews, Univ. of East Anglia (UK) on energy-harvesting materials; Partha Banerjee, Univ. of Dayton on nonlinear liquid crystals, Lawrence Crum, Univ. of Washington on sonoluminescence, William Firth, Univ. of Strathclyde (UK) on optical patterns and nonlinear spatial structures; Brian Fishbine, Los Alamos National Lab. on carbon-nanotube composites; Geoffrey Smith, Univ. of Technology, Sydney (Australia) on nanostructured thin films; and Peidong Yang, Univ. of California/Berkeley on nanowire photonics.

Every CRL is intended partially to educate the audience on phenomenology and terminology and partially to provide a state-of-the-art review in 45 minutes.

Furthermore, the following specialists have agreed to deliver 30-minute Key Lectures:

John Arnold, Univ. of Glasgow (UK) on nanostructured laser-gain materials; Toru Asahi, Waseda Univ. (Japan) on circular dichroism; Mary Boghosian, Jet Propulsion Lab. on space applications of complex mediums; Ian Hodgkinson, Univ. of Otago (New Zealand) on chiral sculptured thin films; Magdy Iskander, Univ. of Utah on electromagnetics materials education; Larisa Panina, Univ. of Plymouth (UK) on giant magneto-impedance; Matthias Schubert, Univ. of Nebraska/Lincoln on generalized ellipsometry of complex layered mediums; Walid Tabbara, Supelco (France) on statistics and electromagnetic compatibility; Werner Weighofer, Univ. of Glasgow (UK) on linear and nonlinear constitutive relations; and Nikolay Zheleved, Univ. of Southampton (UK) on layered chiral metallic metamaterials.

Additional Key Lectures will be announced on: http://www.esm.psu.edu/HTMLs/Faculty/Lakhtakia/CM3.html.

Original unpublished contributions are invited and solicited for oral and poster presentations. Reports of experimental research are especially welcome. All abstracts will be reviewed for competitive selection with respect to novelty, scientific and technological utility, and vision. Topics of interest include, but are not limited to, the following:

- chiral materials
- anisotropic and biaxialotropic materials
- nonlinear materials
- nonlocal materials
- multi-phase composite materials
- multi-functional materials
- functional gradient materials
- energetic materials
- non-stoichiometric materials
- nanostructured materials
- sculptured thin films
- piezoelectric and ferroelectric thin films
- quantum dots and wires
- fullerene and nanotubes
- electrically mediated material response
- magnetically mediated material response
- linear and nonlinear constitutive relations
- homogenization theories
- mesoscopic modeling
- atomic-scale modeling
- optical and optoelectronic applications
- microwave and infrared applications
- acoustic and elastodynamic applications.

Abstract Due Date: 25 November 2001
Manuscript Due Date: 14 April 2002

Proceedings of this conference will be published and available at the meeting. The ABSTRACT AND MANUSCRIPT DUE DATES MUST BE STRICTLY OBSERVED.
Conditions of Acceptance

1. Authors are expected to secure registration fees and travel and accommodation funding, independent of SPIE, through their sponsoring organizations before submitting abstracts.
2. Only original material should be submitted.
3. Commercial papers, descriptions of papers with no research/development content, and papers where supporting data or a technical description cannot be given for proprietary reasons will not be accepted for presentation in this symposium.
4. Abstracts should contain enough detail to clearly convey the approach and the results of the research.
5. Government and company clearance to present and publish should be final at the time of submittal. Authors are required to warrant to SPIE in advance of publication of the Proceedings that all necessary permissions and clearances have been obtained, and that submitting authors are authorized to transfer copyright of the paper to SPIE.
6. Applicants will be notified of acceptance by mail no later than 24 March 2002. Early notification of acceptance will be placed on the SPIE Web site the week of 17 March 2002 at www.spie.org/info/[sympinitial]/

Paper Review

To ensure a high-quality conference, all abstracts and Proceedings of SPIE manuscripts will be reviewed by the Conference Chair/Editor for technical merit and suitability of content. Conference Chair/Editors may require manuscript revision before approving publication, and reserve the right to reject for publication or presentation any paper that does not meet content or presentation expectations. SPIE’s decision on whether to publish manuscripts is final.

Instructions for Submitting Abstracts

All authors are STRONGLY ENCOURAGED to submit their abstracts by the due date using the “submit an abstract” link on the Web at: www.spie.org/info/[sympinitial]/

Using this method of submission ensures that your abstract will be immediately accessible to the conference chair for review. Using other methods of submission (listed below) will delay the processing of your abstract.

- or E-MAIL each abstract separately to: abstracts@spie.org in ASCII text (not encoded) format. IMPORTANT: to ensure receipt and proper processing of your abstract, the Subject line must include only the following: SUBJECT: AMAM2, LAKHTAKIA
- or MAIL your abstract to:
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Final Summary

Accepted authors will receive instructions for submission of the 200-word Final Summary in their author kit. The Final Summaries will be published and available at the meeting.

Oral or Poster Presentation

Instructions for Oral and Poster presentations will be included in your author kit. All Oral and Poster presentations are included in the Proceedings of SPIE and require a manuscript.

Proceedings of SPIE

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Manuscript due dates must be strictly observed. Late manuscripts may not be published in the Proceedings of SPIE, whether the conference volume will be published before or after the meeting. The objective of this policy is to better serve the conference participants as well as the technical community at large, by enabling timely publication of the Proceedings. Papers not presented at the meeting will not be published in the conference Proceedings, except in the case of exceptional circumstances at the discretion of SPIE and the Conference ChairEditors.

Participant Registration Fee

Authors, coauthors, program committee members, and session chairs are expected to register and pay the conference registration fee. If you are a current SPIE Member you will enjoy an additional discount on your symposium registration fee and on educational short courses.