

Complex Mediums III: Beyond Linear Isotropic Dielectrics (am210)

Part of SPIE's International Symposium on
Optical Science and Technology

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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**, Supélec (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.yahogroups.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; **Mathias Schubert**, Univ. of Nebraska/Lincoln on generalized ellipsometry of complex layered mediums; **Walid Tabbara**, Supélec (France) on statistics and electromagnetic compatibility; **Werner Weiglhofer**, Univ. of Glasgow (UK) on linear and nonlinear constitutive relations; and **Nikolay Zheludev**, 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>. Students and novice researchers shall find the scope of Critical Review Lectures and Key Lectures very useful in initiating new avenues of research.

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 bianisotropic 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
- fullerenes 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.



SPIE—The International Society for Optical Engineering

Submission of Abstracts for Optical Science and Technology symposium

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.

Submissions imply the intent of at least one author to register, attend the symposium, and present the paper (either orally or in poster format).

Your abstract must include all of the following:

1. **SUBMIT TO:** AMAM2, LAKHTAKIA
2. **SUBMIT EACH ABSTRACT TO ONE CONFERENCE ONLY** Complex Mediums III: Beyond Linear Isotropic Dielectrics (am210)
3. **ABSTRACT TITLE**
4. **AUTHOR LISTING** (principal author first)
For each author: First (given) name (initials not acceptable), Last (family) name, Affiliation, Mailing address, Telephone, Fax, and Email address.
5. **PRESENTATION**
Indicate your preference for "Oral Presentation" or "Poster Presentation." Final placement is subject to chairs' discretion.
6. **BRIEF BIOGRAPHY** (principal/presenting author)
Approximately 50 words.
7. **ABSTRACT TEXT**
Approximately 250 words.
8. **KEYWORDS**
List a maximum of five keywords.

Conditions of Acceptance

- **Authors are expected to secure registration fees and travel and accommodation funding, independent of SPIE, through their sponsoring organizations before submitting abstracts.**
- Only original material should be submitted.
- 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.
- Abstracts should contain enough detail to clearly convey the approach and the results of the research.
- 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.
- 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/\[sympinitial\]/](http://www.spie.org/info/[sympinitial]/)

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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.

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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.

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Proceedings of SPIE

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