

EDITOR/ASSOCIATE PUBLISHER

Kenneth J. McNaughton

ART DIRECTOR

Steven R. Black

CONTRIBUTING EDITORS

Jay C. Cherniak

Nancy Forbes

Eric Lerner

Jennifer Ouellette

Patrick Young

CIRCULATION DIRECTOR

Jeff Bebee

EDITORIAL ASSISTANTS

Sharon J. Quarles

Marian D. Smith

ADVISORY COMMITTEE

John Rowell (chair),

Adam C. Daire, Charlotte Lowe-Ma,

Richard H. Lyon, Thomas R. Steele,

Richard E. Swanson

ADVERTISING MANAGER

Abby Singer Klar

PRODUCTION MANAGER

Christine DiPasca

SENIOR PRODUCTION ASSISTANT

Rita C. Wehrenberg

EDITORIAL OFFICES

One Physics Ellipse

College Park, MD 20740-3843

Tel: 301-209-3051

Fax: 301-209-0842

e-mail: tip@aip.org

ADVERTISING OFFICES

Two Huntington Quadrangle, Suite 1N01

Melville, NY 11747-4502

Tel: 516-576-2440

800-247-2242

e-mail: advtsg@aip.org

WORLD WIDE WEB

<http://www.aip.org/tip>

AMERICAN INSTITUTE OF PHYSICS

EXECUTIVE DIRECTOR AND CEO

Marc H. Brodsky

MEMBER SOCIETIES

The American Physical Society

Optical Society of America

Acoustical Society of America

The Society of Rheology

American Association of Physics Teachers

American Crystallographic Association

American Astronomical Society

American Association of Physicists in Medicine

American Vacuum Society

American Geophysical Union

OTHER MEMBER ORGANIZATIONS

Corporate Associates

Sigma Pi Sigma Physics Honor Society

Society of Physics Students

LETTERS

Land-based sensing

First, I would like to congratulate you on an article well written ("Earth remote sensing business goes public," *The Industrial Physicist*, February 1999). While reading your article, I noted that your opinion on land-based sensing systems is one that disagrees with the practice and labels it as "impractical." I am currently involved in the development of Telemetry Based Environmental and Geophysical Monitoring Systems (TBEGMS), and I have had the opportunity to discuss this technology with many scientific colleagues. The conclusion reached while talking among the groups of scientists was one of encouragement. Reasoning for this is based on the need for an integrative sensing solution that permits real-time monitoring of areas both large and small, low cost, and the ability to monitor specific events over long durations, which is not currently possible or practical using satellite sensing technologies. I realize the significance of satellite technology, and by no means am I excluding it as useless, but I do think that TBEGMS as a technology would greatly contribute to the overall efforts. I have included a copy of a paper relating to the subject and would enjoy your feedback.

Michael Tocher

The VisionQuest Corp.

Nashville, TN

mtocher@vqst.com

[Author replies: I read your article with great interest, and I think that your TBEGMS system represents a valuable contribution to

the field of environmental monitoring. There is certainly a very important role to be played by sensors on the Earth's surface (Doppler weather radar being a good example). However, large areas of the globe (the South Pacific being an oft-quoted example) are impractical to instrument with surface-based sensors. Space-based, airborne, and surface-based sensors are complementary, and each approach has its role.

David L. Glackin

Pasadena, California]

Stardust credit

The brief column on aerogel for use as a stardust collector (*The Industrial Physicist*, April 1999, p. 16) was not totally correct regarding personnel involved with the project. Yes, Dr. Peter Tsou conceived and gathered funding for using silica aerogel as a collector, but it was the scientific creativity and expertise of my previous postdoctoral research associate, Dr. Steven Jones, that brought the project to fruition. Directors have their role and so do those who do the science in bringing projects to successful closure. They should get equal billing.

Richard E. Partch

Center for Advanced Material Processing

Clarkson University

Potsdam, New York

partch@agent.clarkson.edu

[It is our understanding that there were 15 scientific contributors to the project—Ed.]



THE INDUSTRIAL PHYSICIST (ISSN 1082-1848; CODEN INPHFA), volume 5, number 3.

Copyright © 1999 American Institute of Physics. **Subscriptions:** *The Industrial Physicist* is available free to qualified parties in the USA who complete, sign and return the qualification cards in each issue. Mail to *The Industrial Physicist*, P.O. Box 96000, Collingswood, NJ 08108-4319, or fax (609) 488-6188. Subscriptions can also be entered via the Web at www.cdmcon.com/ipy/subscrib.htm. **Qualified readers outside the USA** pay \$30/year to defray postage. To subscribe, complete a qualification card and send payment: a check for \$30 U.S. drawn on a U.S. bank, or credit card information (indicating Visa/MC/Amex, credit card #, expiration date, name as it appears on the card, and billing address) to AIP, Attn: TIP Payments, Two Huntington Quadrangle, Suite 1N01, Melville, NY 11747-4502. **Non-qualified subscriptions:** Those not active in the industries served by *The Industrial Physicist* can receive the magazine at the following rates: members of AIP-related societies \$18/year, all other individuals \$24/year, libraries and institutions \$72/year. Non-qualified parties residing outside the USA are also subject to the \$30 surcharge for international postage. To order, send request with name, address and payment information as for qualified readers outside the USA. **Change of address, cancellation, duplicate copies:** Please fax the mailing label(s) from the front cover(s) of your magazine(s) to 609-488-6188, and indicate clearly the necessary changes. **Back copies** are available for \$20 each postage paid from the AIP office listed under "Qualified readers outside the USA," using the same pre-payment instructions. **Republication** or systematic or multiple reproduction of any material in this publication is permitted only under license from AIP. Please send requests for permission to AIP Office of Rights and Permissions, Two Huntington Quadrangle, Suite 1N01, Melville, NY 11747-4502; fax (516-576-2327); phone (516-576-2268); email (rights@aip.org). Copies of articles may be made upon payment of a copying fee of \$15 per copy through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

Renaissance woman

Someday I will be a Renaissance woman and be all of these: altruistic, athletic, artistic, capitalistic and, of course, scientific. Thanks to *The Industrial Physicist*, I have enjoyed reading about the hard sciences more. Your magazine features excellent, easy-to-read articles about industrial physics and industrial physicists. The clarity of your articles reminds me of what Einstein once said: "If you can't explain it clearly, then you don't understand it well enough." Thank you for broadening my world.

Carina Flora Flores
Foresight Communications
San Jose, California
flores@lyons.crosswinds.net

Graphics

With publishing creativity so easy and prevalent in our digital age, graphically "enhancing" and spicing-up the pages of journals and other technical literature provides magnetism to material often seen as dry outside our realm. I thoroughly enjoy *The Industrial Physicist's* use of color, fonts, and especially graphical illustrations to clarify both complex and simple technical points, just as I rely on images that are produced using industrial x-ray computed tomography in my position. But I have one serious qualm about your last few publications. *The Industrial Physicist* has taken to using "watermarks" underneath the body text of articles that software tools such as PageMaker, FrameMaker and QuarkXpress now so easily allow (viz, in "Magnets, Mar-

kets, and Magic Cylinders," September 1998, p. 36). While your page layout folks might find this creative I find it distracting. Web pages differentiate themselves this way, with the really good ones clearly standing out. When trying to convey concepts and ideas, science journalism tells us that clarity is key. Please forgive this minor intransigence and continue the otherwise high-quality production.

Robert F. Meyer
Chevron Petroleum Technology Co.
La Habra, California
fmey@chevron.com

Alternative procedures

I read your recent article "Lasers Open Up the Life Sciences" (*The Industrial Physicist*, April 1999, p. 9) with great interest. It is particularly instructive on the recent applications of lasers to eye surgery. However, I disagree with the statement "When you look at the history of surgery... [the ancients]... only had one tool: a knife." This statement is an exaggeration. I can cite, from personal experience, two instances in which alternatives to the traditional surgical knife were used in India with good medical outcomes. What I describe will fall into the realm of alternative (a much maligned term!) medicine.

One of my close relatives developed extra tissue near the conjunctiva. A village medicine woman removed the extra tissue, gradually, over several days, using the sharp edge of a parijatha (*Nyctanthes arbor-tristis*) leaf. The patient enjoyed fully functional eyesight for the next 35 years and still has good eyesight. In the second instance, a medicine man performed a hemorrhoidectomy with hair from a horsetail, with success. This is not to belittle the power and elegance of laser surgical tools. Certainly surgical lasers have several advantages, but they are also expensive. Just compare the cost of typical eye corrective surgery, which runs into several thousand dollars, with the cost of eyeglasses or Bates eye exercises. Being noninvasive, these alternative procedures accommodate the debilities of aging much more easily.

T. V. Rao
Smartek
Manlius, New York
tvrao@worldnet.att.net

HOW TO REACH TIP

<http://www.aip.org/tip>

tip@aip.org

CONTRIBUTING EDITORS

Nancy Forbes

(nforbes@schafercorp-ballston.com)

Eric Lerner (elerner@igc.apc.org)

Jennifer Ouellette (ouellett@aps.org)

Patrick Young (young@nasw.org)