

"FIGURE THIS" CONTEST

1988 MRS Fall Meeting Attendees Didn't Figure on This One

One challenge not anticipated by participants at the 1988 MRS Fall Meeting was the JMR "Figure This" Contest, a materials research "quiz" designed to focus attention on three years of publication by *Journal of Materials Research*.

Borrowing diagrams and micrographs which have appeared in the Journal since its debut in January 1986, the JMR "Figure This" Contest asked meeting attendees to correctly match 10 figures with what were evidently some *very* difficult captions. Dozens of scientists stopped by the JMR Booth to report that they were having trouble choosing the correct captions.

Little wonder...the assortment of figures and captions that caused them to toil so diligently was the result of many hours of conscientious mischief-making by several fellow scientists and the MRS staff, who

shall remain nameless for their own protection.

The goal was to let the 10 figures reflect the wide array of research interests and materials covered in *Journal of Materials Research*. While by no means exhaustive, this collection of materials "art" seems to have achieved that goal fairly well, plus it seems to have had some aesthetic appeal for people who like to look at interesting micrographs and diagrams.

Meeting participants were offered an MRS book of their choice if they correctly identified *all* 10 figures. More than 400 people picked up contest forms at the JMR Booth, a look of determination on their faces. Of the responses turned in, nine contestants correctly identified all 10 figures. Thirteen people came very close, and we'd like to congratulate this group along

with the winners.

As you can see, a few institutions were quite well represented among the entries, leading us to believe there was some collaboration in finding the answers. But—MRS is, after all, an interdisciplinary society, and if cross-disciplinary collaboration is responsible for the research appearing in JMR, why shouldn't there be similar collaboration among contest participants.

Thanks to everyone who participated. There is already talk of having another JMR contest at the 1989 Fall Meeting. To prepare you for that possibility, we want to give you a chance, in case you weren't in Boston, to try the "quiz" out for yourself. Match the figures with correct captions. Good luck! The answers are on p. 64.

JMR "Figure This" Contest Winners

Kate Doan
Northwestern University
Clinton Lee
Raleigh, North Carolina
Stanley Wu-Wei Liu
American Physical Society
Dale Kipp
Naval Weapons Center
Mark Ratner
Northwestern University
S. Sharan
North Carolina State University
A.R. Srivatsa
North Carolina State University
Warren Turner
Gordon McKay Laboratory
Hanno zur Loye
Northwestern University

D.J. Eaglesham
AT&T Bell Laboratories
Chuck Henager
Battelle Pacific Northwest Laboratories
Robert Jansen
Naval Research Laboratory
Ratnaji R. Kola
North Carolina State University
M. Marius
AT&T Bell Laboratories
Gordon Pike
Sandia National Laboratory
Dan Schwarcz
Stevens Institute of Technology
R. Solanki
Oregon Graduate Center
Uppili Sudarsan
Oregon Graduate Center

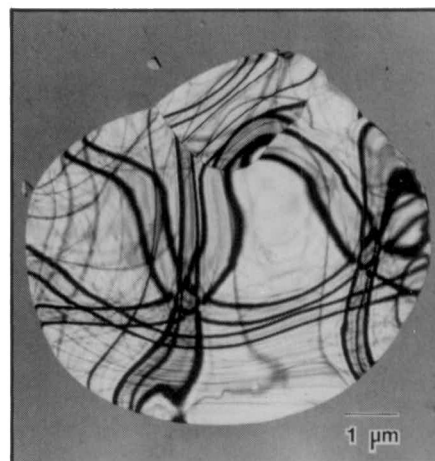


Figure 1

Honorable Mention

Mark Aindow
Case Western Reserve University
Nyles Cody
Oregon Graduate Center
Michael J. DeWeert
Naval Research Laboratory

Captions

- | | | |
|--------------------------|--------------------------------|---|
| 1. $Ge_{0.1}Si_{0.9}/Si$ | 7. DNA | 14. X-ray texture: $LiNbO_3$ |
| 2. Simulated mullite | 8. $Y_1Ba_2Cu_3O_{7-x}$ | 15. Glass corrosion |
| 3. $\beta-Al_3Mn_3Si$ | 9. Alumina | 16. Laser heating |
| 4. SiC | 10. Sessile Al-6%Mg/ Al_2O_3 | 17. $Al_{0.3}Ga_{0.7}As$ tunnel barrier map |
| 5. Transient strain | 11. Crept nickel aluminide | 18. $\beta-ZnP_2$ |
| 6. Diamond | 12. Polystyrene | 19. Chaos trajectory |
| | 13. $Ti:Al_2O_3$ | 20. Superlattice images |

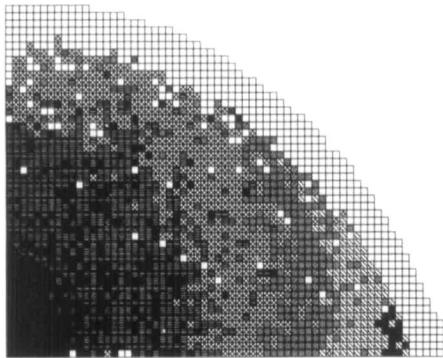


Figure 2

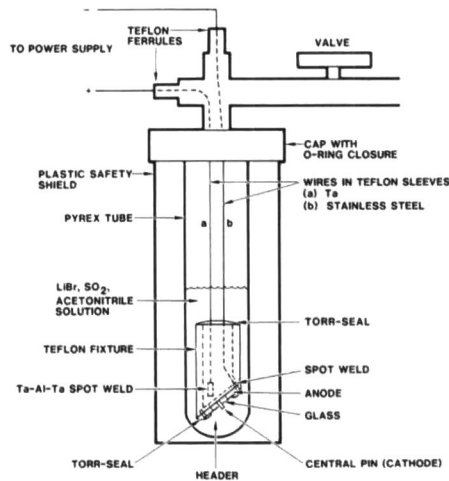


Figure 3

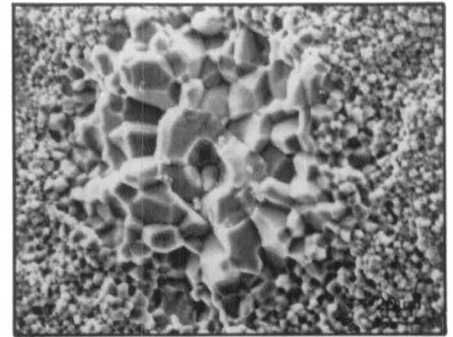


Figure 4

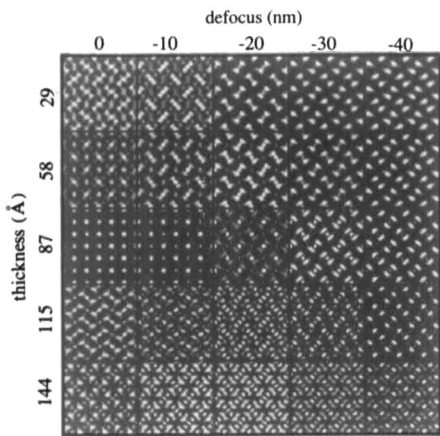


Figure 5

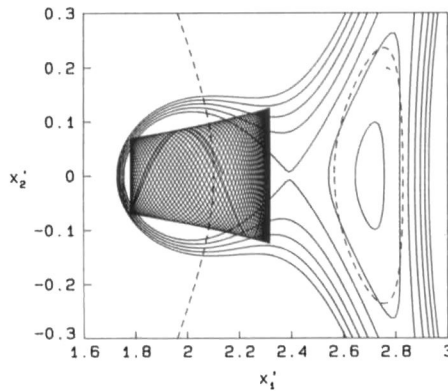


Figure 6

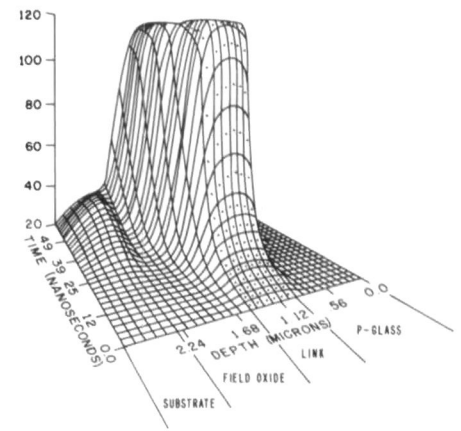


Figure 7

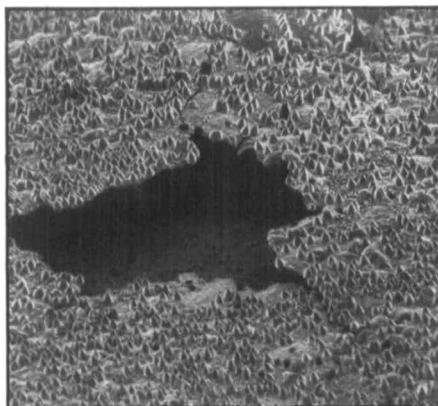


Figure 8

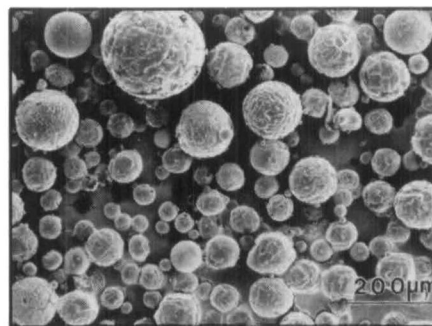


Figure 9



Figure 10

Figure Credits: Thanks to these JMR authors whose figures appeared in this contest: R.K. Aldert, F.S. Biancianiello, B.C. Bunker, J.D. Chlipala, B.J. Dalglish, S.C. Douglas, A.G. Evans, J.A. Horton, N.J. Ianno, V. Jayaram, M.J. Kaufman, K.G. Kreider, J.W. Lee, C.G. Levi, A.J. Markworth, J.K. McCoy, R. Mehrabian, D.E. Meyer, A.J. Nelson, R.K. Quinn, M.A. Reed, R.W. Rollins, L.M. Scarfone, J.H. Schneibel, D. Schryvers, K. Srikrishna (NCEM), A.B. Swartzlander, G. Thomas, J.J. Valencia, A.E. Wetsel, J.A. Woollam.

Journal of Materials Research Expansion Continues into 1989

Journal of Materials Research experienced another year of rapid growth and expansion in 1988, reflecting the strength of ongoing growth in materials research. With publication of the November/December 1988 issue, JMR successfully completed its third volume, providing readers almost 1,500 published pages of articles on some of the latest developments in materials research. Volume 3 of JMR exceeded Volume 2 (1987) by more than 500 pages, an increase of more than 50%. Manuscript submissions and the size of the first issue of Volume 4 indicate that the growth of JMR will continue during 1989.

Along with a substantial increase in the number of published pages, JMR also expanded its topical coverage in 1988. Like Volume 2, Volume 3 included more papers in fields such as intermetallic alloys, ceramics, electronic materials, mechanical properties, metals, phase transformation, photochemical processing, polymers, powder metallurgy, superconductors, thermodynamic properties, and thin films. However, Volume 3 also included papers dealing with

casting, catalytic materials, chemical synthesis, electron beam irradiation, hopping conductivity, optical metallography, physical vapor deposition, and secondary ion mass spectroscopy. The Journal also saw increased numbers of papers by authors from outside the United States.

The November/December 1988 issue contained 400 pages, making it JMR's largest issue to date. This issue featured a 200-page section of 28 articles on laser and particle beam processing of materials. The articles spanned such topics as rapid thermal annealing, laser-assisted deposition, fast transient melting, and metastable phase formation, as well as ion-assisted deposition and etching, ion-beam mixing, ion implantation, and defects.

Volume 4 of JMR promises even more expansion in 1989 with an increasing number of published articles and expanded topical coverage. The January/February 1989 issue of Volume 4, published in mid-January, contains 240 pages and features articles on a variety of topics such as intermetallic alloys, annealing, ceramics, composites, com-

pound semiconductors, defects, metals, superconductors, and thin films. The March/April 1989 issue contains approximately 32 articles on topics such as electroplating, fast ion conduction, glasses, kinetic properties, phase transformation, sintering, polymers, transmission electron microscopy, and x-ray diffraction.

The November/December 1989 issue will again include a special topical section on an important area of materials research. Watch for the Call for Papers announcement in an upcoming issue of the *MRS BULLETIN*.

For information on manuscript submission, contact Linda Krysinski, Editorial Office Supervisor, Journal of Materials Research, Materials Research Society, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; telephone (412) 367-9111; fax (412) 367-4373.

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CONFERENCE REPORTS

International Symposium Considers Industrial Applications of Mössbauer Effect

The International Symposium on the Industrial Applications of the Mössbauer Effect (ISIAME'88) was held September 12 to 16, 1988 in Parma, a historical university town in northern Italy. Participants enjoyed the region's traditional hospitality, well-known cooking, and the world famous musical traditions of the town where Verdi and Toscanini lived and worked. The meeting was organized by M. Carbuicchio (chair), G. Principi (co-chair), A. Derru, and U. Russo.

This symposium followed a previous one held in 1984 in Honolulu, Hawaii. Its main purpose was to bring together scientists working with Mössbauer spectroscopy and related techniques in applied materials science research. This multidisciplinary approach was well reflected in the invited lectures, which covered not

only the traditional fields of applied Mössbauer spectroscopy, but also dealt with other techniques (neutron and x-ray scattering, electron spectroscopies, slow positron beams and other nuclear techniques) that can be fruitfully combined with the Mössbauer effect. Some lectures focused on applied research areas in which Mössbauer spectroscopy can play an effective role, such as amorphous materials, hard magnetic materials, ion implantation and catalysis.

More than 100 participants from various countries attended. Most of the contributed papers were presented in poster sessions, followed by a discussion session in which the authors and the audience were able to pursue in greater detail the most relevant problems brought up by the posters. The oral sessions (13 invited and

15 contributed presentations) also allowed ample time for the participants to discuss and debate with the speakers.

The proceedings of the symposium, which will include the invited and the accepted contributed papers, are scheduled to be published in an early 1989 issue of the journal *Hyperfine Interactions*.

Research groups from various countries have expressed interest in organizing the next ISIAME Symposium which would be held in 1992 according to the four-year cycle originally proposed for this event. A final decision has been delayed until the next International Conference on the Applications of the Mössbauer Effect (ICAME'89) in Budapest.

L. Zanotti