

## JOURNAL OF POWDER METALLURGY

### TABLE OF CONTENTS FOR VOLUME 40, NUMBERS 1-6, 2004

#### 40/1 JANUARY/FEBRUARY 2004

- 2 From the Publisher
- 4 Editor's Note
- 5 Newsmaker *Paul A. Hauck*
- 7 P/M Industry News in Review
- 9 Company Profile *Ultrafine Powder Technology*
- 13 Spotlight On ... *D.J. Morasch, PMT*
- 15 Consultants' Corner *Diran Apelian*
- OUTSTANDING TECHNICAL PAPER: PM<sup>2</sup>TEC2003**
- 19 Finish-Turning of Hardened Powder Metallurgy Steel Using Cryogenic Cooling, *Z. Zurecki, R. Ghosh and J.H. Frey*
- RESEARCH & DEVELOPMENT**
- 33 Improving NdFeB Magnet Fabrication: In Situ Observation of Powder Flow, *H. Kotera, F. Tsumori, I. Iritani, T. Watanabe and S. Shima*
- 41 Properties of Hot Pressed Near-Stoichiometric Fe-Co Alloys, *J. Konstany, W. Ratuszek, J. Jamrozek and I. Olszewska*
- RESEARCH MANAGEMENT**
- 53 Rising Stakes of Research—Identifying the Right Partner, *S.L. Elder and C.M. Doran*
- DEPARTMENTS**
- 57 Meetings and Conferences
- 58 Instructions for Authors
- 60 U.S. Patents
- 64 APMI Membership Application
- 65 P/M Bookshelf
- 66 Web Site Directory
- 72 Advertisers' Index

#### 40/2 MARCH/APRIL 2004

- 3 Editor's Note
- 5 Newsmaker *Herbert Danninger*
- 7 P/M Industry News in Review
- 11 Company Profile, *Proform, a division of Morgan Advanced Ceramics-US*
- 13 PMT Spotlight On ... *William H. Shropshire*
- 15 Consultants' Corner *Brian H. Pittenger*
- FOCUS: P/M BIOMATERIALS**
- 19 Porous P/M Structures for Orthopaedic and Dental Implant Applications, *R.M. Pilliar*
- 29 Fabrication of Biomedical Implants by Combined Direct Metal Laser Sintering and Hot Isostatic Pressing, *W.L. Karlsen, J. Kotila and J-E. Lind*
- 43 Bone Cell Adhesion on Titanium Implants with Nanoscale Surface Features, *J.U. Ejiolor and T.J. Webster*
- 55 Synthesis of Titanium Composite Bio-Implants, *D.K. Pattanayak, V. Mathur, B.T. Rao and T.R. Mohan*
- DEPARTMENTS**
- 63 Book Review
- 67 Meetings and Conferences
- 68 U.S. Patents
- 71 P/M Bookshelf
- 72 Advertisers' Index

#### 40/3 MAY/JUNE 2004

- 3 Editor's Note
- 5 Newsmaker *Kathleen E. Sample*
- 9 P/M Industry News in Review
- 13 Annual Technology Review *Technology Moves the Market*
- 27 Exhibitor Showcase: PM<sup>2</sup>TEC2004
- 37 PMT Spotlight On ... *Nicholas Tuescher*
- 39 Consultants' Corner *Randall M. German, FAPMI*
- ENGINEERING & TECHNOLOGY**
- 45 Mechanical Properties of Sinter-Hardened Steels, *S. N. Thakur, J.W. Newkirk, G.B. Fillari, T.F. Murphy and K.S. Narasimhan*
- 57 Tensile Properties of Vacuum-Sintered Dual-Phase Steels, *T. Marcu, A. Molinari, G. Straffelini and S. Berg*
- RESEARCH & DEVELOPMENT**
- 67 Dispersion-Strengthened Cu/Ag by Reactive Milling, *P.B. Joshi, G.R. Marathe, A. Pratap and V.K. Kaushik*
- DEPARTMENTS**
- 73 Meetings and Conferences
- 74 Instructions for Authors
- 76 APMI Membership Application
- 77 U.S. Patents
- 79 P/M Bookshelf
- 80 Advertisers' Index

#### 40/4 JULY/AUGUST 2004

- 3 Editor's Note
- 7 Newsmaker, *Leonid I. Frayman*
- 11 P/M Industry News in Review
- 14 PMT Spotlight On ... *Alan H. Johnson*
- 17 Consultants' Corner *Myron I. (Mike) Jaffe*
- ENGINEERING & TECHNOLOGY**
- 21 2004 Design Competition Winners, *P.K. Johnson*
- 27 State of the North American P/M Industry—2004, *D.L. Schaefer and C.J. Trombino*
- 33 Characterization of Commercial Metallic Coatings for Corrosion Protection of P/M Parts, *S. Rossi, L. Fedrizzi, and F. Deflorian*
- RESEARCH & DEVELOPMENT**
- 41 Synthesis of Dispersion-Strengthened Copper by Mechanical Alloying and Reaction Milling, *N. Kumar, K. Muraleedharan, P.R. Soni, and R. Sundaresan*
- DEPARTMENTS**
- 47 Book Review
- 49 Meetings and Conferences
- 51 U.S. Patents
- 60 APMI Membership Application
- 61 Instructions for Authors
- 63 P/M Bookshelf
- 64 Advertisers' Index

## 40/5 SEPTEMBER/OCTOBER 2004

- 3 Editor's Note**  
**7 Newsmaker** *Iver E. Anderson*  
**11 P/M Industry News in Review**  
**15 P/M Metallography Competition Winners, Part I,**  
*Grand Prize, Research & Development, and*  
*Artistic categories*  
**27 In the Beginning: A History of MPIF** *Kempton H. Roll*  
**31 PM World Congress in Vienna**  
**33 Company Profile** *Lovejoy Sintered Technologies*  
**37 PMT Spotlight On ...** *Ronald E. Arble*  
**39 Consultants' Corner** *Howard I. Sanderow*  
**43 Axel Madsen/CPMT Scholar Reports,** *D.P. Harding, C.*  
*Hennessey, G.B. Piotrowski and E. Robert-Perron*  
**ENGINEERING & TECHNOLOGY**  
**49 Spray Forming of Tubular Bearing-Steel Preforms,**  
*C. Cui, A. Schulz, U. Fritsching, K. Bauckhage and P. Mayr*  
**54 High-Temperature Sintering: Cost Analysis,** *S.K. Smith*  
**RESEARCH & DEVELOPMENT**  
**57 Cooling Rates of P/M Steels,** *G.F. Bocchini, A. Baggioli,*  
*R. Gerosa, B. Rivolta and G. Silva*  
**DEPARTMENTS**  
**66 Meetings and Conferences**  
**67 APMI Membership Application**  
**68 Instructions for Authors**  
**70 U.S. Patents**  
**71 P/M Bookshelf**  
**72 Advertisers' Index**

## 40/6 NOVEMBER/DECEMBER 2004

- 3 Editor's Note**  
**4 Newsmaker** *James J. Oakes*  
**7 P/M Industry News in Review**  
**9 P/M Metallography Competition**  
*Method Development and Student categories*  
**13 Company Profile** *Megamet Solid Metals, Inc.*  
**15 PMT Spotlight On ...** *Christopher T. Adam*  
**17 Consultants' Corner** *Joseph T. Strauss*  
**19 Outstanding Poster Award,** *C. Hennessey*  
**FOCUS: MAGNETIC MATERIALS**  
**23 Magnetism, Magnetic Materials, and P/M,** *F. Hanejko*  
**25 P/M Processing of Soft Magnetic Materials,**  
*K.S. Narasimhan*  
**37 Particulate Processing and Properties of High-**  
**Performance Permanent Magnets,**  
*I.E. Anderson, W. Tang, and R.W. McCallum*  
**61 Powder Metal Permanent Magnet Machine,**  
*F. Reiter, Jr. and T. Stuart*  
**DEPARTMENTS**  
**68 Meetings and Conferences**  
**69 P/M Bookshelf**  
**70 Table of Contents: Volume 40, Numbers 1-6, 2004**  
**72 Advertisers' Index**