

The following are selected readings for magnesium thermomechanical processing and deformation reviewed by an advisory group of TMS subject matter experts



PAPER TITLE	AUTHOR(S)	SOURCE	MORE
"Extrusion Limits of Magnesium Alloys"	<i>D. L. Atwell and M. R. Barnett</i>	Metallurgical and Materials Transactions A, Vol. 38, December 2007, p. 3032	Read Abstract
"Microstructural Development during Hot Working of Mg-3Al-1Zn"	<i>A. G. Beer and M. R. Barnett</i>	Metallurgical and Materials Transactions A, Vol. 38, August 2007, p. 1856.	Read Abstract
"Texture Evolution in AM30 Mg Alloy Deformed Along Different Strain Paths"	<i>L. Jiang, J. J. Jonas, R. Mishra, A. Luo, A. Sachdev, and S. Godet</i>	Magnesium Technology 2007, p. 23	Link to 2007 Proceedings
"Twinning and Ductile Failure of Mg-3Al-1Zn"	<i>M. Barnett</i>	Magnesium Technology 2007, p. 29	Link to 2007 Proceedings
"Effect of Hot Rolling Parameters on the Hot Tensile Behavior of AZ31 Magnesium Sheet"	<i>G. Vespa, R. Verma, J. Carter, S. Yue and E. Essadiqi</i>	Magnesium Technology 2007, p. 69	Link to 2007 Proceedings
"Low Temperature Hydrostatic Extrusion of Magnesium Alloys"	<i>J. Bohlen, J. Swiostek, H.-G Brokmeier, D. Letzig, and K. U. Kainer</i>	Magnesium Technology 2006, p. 213	Link to 2006 Proceedings
"Effect of Twinning on the Mechanical Behavior of a Magnesium Alloy Sheet During Strain Path Changes"	<i>A. Jain, and S. R. Agnew</i>	Magnesium Technology 2006, p. 219	Link to 2006 Proceedings
"Development and Validation of an Extrusion Limit Diagram for AZ31 Magnesium Alloy"	<i>Y. Wang, X. Zeng, W. Ding, A. A. Luo, and A. K. Sachdev</i>	Magnesium Technology 2006, p. 245	Link to 2006 Proceedings
"Infrared Processing of Magnesium Wrought Alloys"	<i>J. A. Horton, C. A Blue, T. Muth, A. L. Bowles, and S. R. Agnew</i>	Magnesium Technology 2005, p. 155	Link to 2005 Proceedings
"Process and Alloy Development for Hydrostatic Extrusion of Magnesium: The European Community Research Project MAGNEXTRUSCO"	<i>J. Bohlen, J. Swiostek, W. H. Sillekens, P.-J. Vet, D. Letzig, and K. U. Kainer</i>	Magnesium Technology 2005, p. 241	Link to 2005 Proceedings
"An Efficient Route to Magnesium Alloy Sheet: Twin Roll Casting and Hot Rolling"	<i>L. Lochte, H. Wwestengen, and J. Rodseth</i>	Magnesium Technology 2005, p. 247	Link to 2005 Proceedings
"Macroscopic Damage by the Formation of Shear Bands during the Rolling and Deep Drawing of Magnesium Sheets" (Research Summary)	<i>Fr.-W. Bach, B.-A. Behrens, M. Rodman, A. Rossberg, and G. Kurz</i>	JOM May 2005, p. 57	Read the Full Paper
"Thermal Forming of Magnesium Alloys: Processing and Simulation"	<i>P. Krishnamurthy, Y. Liu, X. Wu, W. Yang and M. L. Werner</i>	Magnesium Technology 2004, p. 51	Read the Full Paper
"Heated Hydro-Mechanical Deep Drawing of Magnesium Sheet Metal"	<i>G. Kurz</i>	Magnesium Technology 2004, p. 67	Read the Full Paper
"Expanding the Extrusion Limits of Wrought Magnesium Alloys"	<i>C. Davies and M. Barnett</i>	JOM May 2004, p. 22	Read the Full Paper
"Achieving Enhanced Ductility in a Dilute Magnesium Alloy Through Severe Plastic Deformation"	<i>K. Matsubara, Y. Miyahara, Z. Horita, and T. Langdon</i>	Metallurgical and Materials Transactions A, Vol. 35, June 2004, p. 1735	Read Abstract
"A Taylor Model Based Description of the Proof Stress of Magnesium AZ31 during Hot Working"	<i>M.R. Barnett</i>	Metallurgical and Materials Transactions A, Vol. 34, September 2003, p. 1799	Read Abstract
"Assessment of Equal Channel Angular Extrusion Processing of Magnesium Alloys"	<i>S.R. Agnew, T.M. Lillo, J. Macheret, G.M. Stoica, L. Chen, Y. Lu, D. Fielden, and P.K. Liaw</i>	Magnesium Technology 2001, p. 243	Read the Full Paper
"Forging of Magnesium Using Squeeze Cast Pre-form"	<i>G. Tausig, N.J. Ricketts, and S.R. Peck</i>	Magnesium Technology 2001, p. 235	Read the Full Paper

"Magnesium Alloy Sheet Produced by Twin Roll Casting"	<i>R.V. Allen, D.R. East, T.J. Johnson, W.E. Borbidge, and D. Liang</i>	Magnesium Technology 2001, p. 75	Read the Full Paper
"Properties of Fine-Grained Cast Magnesium Alloys for Sheet Manufacture"	<i>U. Draugelates, B. Baouaifi, R. Poss, and C-C. Kendenburg</i>	Magnesium Technology 2001, p. 223	Read the Full Paper
"Superplasticity in Coarse Grained Mg-Al Class I Solid Solution of HCP Structure"	<i>T. Ito, J. Sacki, and M. Otsuka</i>	Magnesium Technology 2001, p. 217	Read the Full Paper
"Flow Stress Microstructures and Modeling in Hot Extrusion of Magnesium Alloys"	<i>H.J. McQueen, M. Mushlaev, M. Sauerborn, and A. Mwembela</i>	Magnesium Technology 2000, p. 355	Read the Full Paper
"Deformation Characteristics of Wrought Magnesium Alloys AZ31, ZK60"	<i>A. Ben-Artzy, A. Shtechman, N. Ben-Ari, and D. Dayan</i>	Magnesium Technology 2000, p. 363	Read the Full Paper
"Protective Atmosphere for the Heat Treatment of Magnesium Alloys"	<i>P.F. Stratton and E.K. Chang</i>	Magnesium Technology 2000, p. 71	Read the Full Paper
"Demands on Tool and Machine Design for Temperature Supported Hydroforming of Magnesium and Aluminium Alloys"	<i>Reimund Neugebauer, Michael Seifert, Petr Kurka, Andreas Sterzing</i>	SAE 2006 Commercial Vehicle Engineering Congress & Exhibition, October 2006. Session: Advanced Materials and Designs (Part 1 of 2)	Read Abstract
"Warm Forming of Magnesium Sheet Metal"	<i>K. Siegert, S. Jaeger</i>	SAE 2004 World Congress & Exhibition, March 2004. Session: Sheet/Hydro/Gas Forming Technology & Modeling (Part 1 & 2)	Read Abstract
"Wrought Magnesium Alloys and Manufacturing Processes for Automotive Applications"	<i>Alan A. Luo</i>	SAE 2005 World Congress & Exhibition, April 2005. Session: Magnesium Technologies (Part 3 & 4 of 4)	Read Abstract