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#### **Technical Publications**

### **Journal Papers:**

- 1. **F. Abu-Farha**, (2012), "A Preliminary Study on the Feasibility of Friction Stir Back Extrusion", Scripta Materialia, Accepted (doi: 10.1016/j.scriptamat.2012.01.059).
- 2. **F. Abu-Farha**, R. Verma, and L. Hector, (2012), "High Temperature Composite Forming Limit Diagrams of Four Magnesium AZ31B Sheets Obtained by Pneumatic Stretching", Journal of Materials Processing Technology, Accepted (doi: 10.1016/j.jmatprotec.2012.01.008).
- 3. **F. Abu-Farha**, L. Hector and M. Nazzal, (2011), "Pneumatic Stretching Test for Evaluating the Formability of AA5083 at QPF Conditions", <u>Journal of Steel</u> Research International. Accepted.
- 4. **F. Abu-Farha** and L. Hector, Jr., (2011), "Sheet Orientation Effects on the Hot Formability Limits of Lightweight Alloys", <u>ASME Journal of Manufacturing Science and Engineering</u>, vol. 133, no. 6, pp. 061005 1-8.
- 5. **F. Abu-Farha**, (2011) "On the Development of a Forming Limit Surface for 5083 Aluminium Alloy Sheet", Journal of Metals (JOM), vol. 63, no. 11, pp. 72-78.
- 6. M. Nazzal, **F. Abu-Farha**, and R. Curtis, (2011), "Finite Element Simulations for Investigating the Effects of Specimen Geometry in Superplastic Tensile Tests", <u>Journal of Materials Engineering and Performance</u>, vol. 20, no. 6, pp. 865-876.
- 7. **F. Abu-Farha**, M. Nazzal and R. Curtis, (2011), "Optimum Specimen Geometry for Accurate Tensile Testing of Superplastic Metallic Materials", Experimental Mechanics, vol. 51, no. 6, pp. 903-917.
- 8. **Fadi Abu-Farha** and Mohammad Nazzal, (2010), "Advancing Elevated Temperature Hydro/Pneumatic Sheet Metal Forming Operations through Reverse Bulging", Transactions of the NAMRI/SME, vol. 38, pp. 601-608.
- 9. **Fadi Abu-Farha** and Louis Hector, Jr., (2010), "Developing Cruciform Specimen Geometries for Warm and Elevated Temperature Biaxial Testing", <u>Transactions of the NAMRI/SME</u>, vol. 38, pp. 459-466.
- 10. **F. Abu-Farha**, L. Hector and M. Nazzal, (2010), "On the Development of Viable Cruciform-Shaped Specimens: Towards Accurate Elevated Temperature Biaxial Testing of Lightweight Materials", Key Engineering Materials, vol. 433, pp. 93-101.
- 11. M. Nazzal and **F. Abu-Farha**, (2010), "Finite Element Modeling of Superplastic Forming of Tubular Shapes", Key Engineering Materials, vol. 433, pp. 179-184.
- 12. **F. Abu-Farha**, M. Nazzal and R. Curtis, (2010), "The Effects of Specimen Geometry on the Accuracy of Tensile Testing of Metallic Superplastic Materials", <u>Key</u> Engineering Materials, vol. 433, pp. 325-331.

- 13. **F. Abu-Farha**, M. Nazzal, O. Rawashdeh and R. Michael, (2010), "Contact Sensors for Accurate Monitoring and Prediction of Sheet Deformation during Hydro/Pneumatic Forming Operations", Key Engineering Materials, vol. 433, pp. 125-132.
- 14. **F. Abu-Farha** and R. Curtis, (2009), "Quick-Mount Grips: Towards an Improved Standard for Uniaxial Tensile Testing of Metallic Superplastic Sheets", Materialwissenschaft und Werkstofftechnik, vol. 40, no. 11, pp. 836-841.
- 15. **F. Abu-Farha**, L. Hector and M. Khraisheh, (2009), "Developing Cruciform-Shaped Specimens for Elevated Temperature Biaxial Testing of Lightweight Materials", Journal of Metals (JOM), vol. 61, no. 8, pp. 48-56.
- 16. F. S. Jarrar, **F. K. Abu-Farha**, L. G. Hector and M. K. Khraisheh, (2009), "Simulation of High Temperature AA5083 Bulge Forming with a Hardening/Softening Material Model", <u>Journal of Materials Engineering & Performance</u>, vol. 18, no. 7, pp. 863-870.
- 17. **F. K. Abu-Farha**, N. A. Shuaib, M. K. Khraisheh and K. J. Weinmann, (2008), "Limiting Strains of Sheet Metals Obtained by Pneumatic Stretching at Elevated Temperatures", Annals of the CIRP, vol. 57, pp. 275-278.
- 18. **F. K. Abu-Farha** and M. K. Khraisheh, (2008), "Post-Superplastic Forming Analysis Under Different Loading Paths. Part One: Uniaxial Loading Case", Journal of Materials Engineering & Performance, vol. 17, no. 2, pp. 153-162.
- 19. **F. K. Abu-Farha** and M. K. Khraisheh, (2008), "An Integrated Approach to the Superplastic Forming of Lightweight Alloys: Towards Sustainable Manufacturing", International Journal of Sustainable Manufacturing, vol. 1, no. 1/2, pp. 18-40.
- 20. **F. K. Abu-Farha** and M. K. Khraisheh, (2007), "Analysis of Superplastic Deformation of AZ31 Magnesium Alloy", <u>Journal of Advanced Engineering Materials (JAEM)</u>, vol. 9, no. 9, pp. 777-783.
- 21. M. K. Khraisheh, **F. K. Abu-Farha** and K. J. Weinmann, (2007), "Investigation of Post-Superplastic Forming Properties of AZ31 Magnesium Alloy", <u>Annals of the CIRP</u>, vol. 56, no. 1, pp.289-292.
- 22. B. M. Darras, M. K. Khraisheh, **F. K. Abu-Farha** and M. A. Omar, (2007), "Friction Stir Processing of AZ31 Commercial Magnesium Alloy", Journal of Material Processing Technology, vol. 191, no. 1-3, pp. 77-81.
- 23. M. Nazzal, M. Khraisheh and **F. Abu-Farha**, (2007), "The Effect of Strain Rate Sensitivity Evolution on the Deformation Stability During Superplastic Forming", Journal of Material Processing Technology, vol. 191, no. 1-3, pp. 189-192.
- 24. **F. Abu-Farha** and M. Khraisheh, (2007), "Mechanical Characteristics of Superplastic Deformation of AZ31 Magnesium Alloy", Journal of Materials Engineering & Performance, vol. 16, no. 2, pp. 192-199.
- 25. **F. Abu-Farha** and M. Khraisheh, (2007), "On the High Temperature Testing of Superplastic Materials", <u>Journal of Materials Engineering & Performance</u>, vol. 16, no. 2, pp. 142-149.
- 26. **F. Abu-Farha**, N. Rawashdeh and M. Khraisheh, (2007), "Superplastic Deformation of Magnesium Alloy AZ31 Under Biaxial Loading Condition", Materials Science Forum, vol. 551-552, pp. 219-224.

- 27. M. K. Khraisheh, **F. K. Abu-Farha**, M. A. Nazzal and K. J. Weinmann, (2006), "Combined Mechanics-Materials Based Optimization of Superplastic Forming of Magnesium AZ31 Alloy: Model Development and Experimental Validation", <u>Annals</u> of the CIRP, vol. 55/1, pp. 233-236.
- 28. **F. Abu-Farha** and M. Khraisheh, (2005), "Modeling of Anisotropic Deformation in Superplastic Sheet Metal Stretching", Journal of Engineering Materials and Technology, vol. 127, no. 1, pp. 159-164.
- 29. **F. Abu-Farha** and M. Khraisheh, (2004), "Constitutive Modeling of Deformation-Induced Anisotropy in Superplastic Materials", <u>Materials Science Forum</u>, vol. 447-448, pp. 165-170.
- 30. M. K. Khraisheh and **F. K. Abu-Farha**, (2003), "Microstructure-Based Modeling of Anisotropic Superplastic Deformation", <u>Transactions of the North American Manufacturing Research Institute (NAMRI/SME)</u>, vol. 31, pp.41-47.

### **Conference Papers:**

- 1. **Fadi Abu-Farha**, "Spiral Friction Stir Processing (SFSP) for the Extrusion of Lightweight Alloy Tubes", Proceedings of the 07<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2012, Notre Dame, IN, 04<sup>th</sup> 08<sup>th</sup> June 2012 (Paper No. MSEC2012-7358). Accepted.
- 2. **Fadi Abu-Farha**, Ravi Verma, Louis G. Hector, "Hot Formability Curves for Four AZ31B Magnesium Alloy Sheets Obtained by the Pneumatic Stretching Test", Magnesium Technology 2012, Proceedings of the 141<sup>st</sup> TMS Annual Meeting and Exhibition (TMS 2012), Orlando, FL, 11<sup>th</sup> 15<sup>th</sup> March 2012. Accepted.
- 3. M.A. Nazzal, **F. Abu-Farha**, F. Jarrar, "The Effects of Hydrostatic Pressure on Superplastic Deformation Stability in the Presence of Cavitation", Proceedings of the 10<sup>th</sup> International Conference on Technology of Plasticity (ICTP 2011), Aachen, Germany, 25<sup>th</sup>-30<sup>th</sup> September 2011, pp. 1061-1065.
- 4. **Fadi Abu-Farha** and Brad Deeter, "Sheet Orientation Effects on the Formability Limits of the AZ31B Magnesium Alloy at SPF Conditions", Proceedings of the 06<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2011, Corvallis, OR, 13<sup>th</sup> 17<sup>th</sup> June 2011 (Paper No. MSEC2011-50177).
- 5. **Fadi Abu-Farha**, Louis G. Hector, Jr., and Paul E. Krajewski, "Forming Limit Curves for the AA5083 Alloy under Quick Plastic Forming Conditions", Proceedings of the 2011 SAE World Congress, Detroit, MI, 12<sup>th</sup>-14<sup>th</sup> April 2011 (Paper No. SAE 2011-11-0235).
- 6. **Fadi Abu-Farha**, "Reverse Bulging in Hydro/Pneumatic Sheet Metal Forming Operations: Is It Worth It?", Proceedings of the 05<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2010, Erie, PA, 12<sup>th</sup>-15<sup>th</sup> October 2010 (Paper No. MSEC2010-34285).
- 7. **Fadi Abu-Farha**, Joshua Sabo and Craig Herring, "In Pursuit of an Integrated Methodology for Accurate Elevated Temperature and Superplastic Tensile Testing", Proceedings of the 05<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2010, Erie, PA, 12<sup>th</sup>-15<sup>th</sup> October 2010 (Paper No. MSEC2010-34284).
- 8. **F. Abu-Farha** and L. Hector, "Cruciform Geometries for Elevated-Temperature Biaxial Testing of Magnesium AZ31B", Proceedings of the 2010 TMS Annual Meeting and Exhibition, Seattle, WA, 14<sup>th</sup>-18<sup>th</sup> 2010.
- 9. M.C. Cusick, **F.K. Abu-Farha**, P. Lours, Y. Maoult, G. Bernhart and M.K. Khraisheh, "Towards Superplastic Forming of AZ31 Magnesium Alloy with Controlled Microstructure", Proceedings of the EuroSPF 2008 Conference, Carcassonne, France, 03<sup>rd</sup> 05<sup>th</sup> September 2008.
- 10. **F. K. Abu-Farha** and R. V. Curtis, "On the Standard Test Methods for Evaluating the Tensile Properties of Metallic Superplastic Sheets", Proceedings of the EuroSPF 2008 Conference, Carcassonne, France, 03<sup>rd</sup> 05<sup>th</sup> September 2008.
- 11. **F. K. Abu-Farha**, M. A. Nazzal and M. K. Khraisheh, "An Experimental Study on the Stability of Superplastic Deformation of AZ31 Mg Alloy", Proceedings of the 10<sup>th</sup>

- ESAFORM (European Scientific Association for material FORming) Conference on Material Forming, Zaragoza, Spain, 18<sup>th</sup> 20<sup>th</sup> April 2007.
- 12. **F. K. Abu-Farha** and M. K. Khraisheh, "On the Superplastic Forming of the AZ31 Magnesium Alloy", Proceedings of the 7<sup>th</sup> International Conference on Magnesium Alloys and their Applications, Dresden, Germany, 6<sup>th</sup> 9<sup>th</sup> November 2006, pp. 399-405.
- 13. **F. K. Abu-Farha**, "Constitutive Modeling of Anisotropy and Microstructural Evolution during Superplastic Deformation", Proceedings of the 3<sup>rd</sup> MIT Conference on Computational Fluid and Solid Mechanics, Cambridge, 14<sup>th</sup> 17<sup>th</sup> June 2005, pp. 36-39.
- 14. **F. Abu-Farha** and M. Khraisheh, "Deformation Characteristics of AZ31 Magnesium Alloy Under Various Forming Temperatures and Strain Rates", Proceedings of the 8<sup>th</sup> ESAFORM (European Scientific Association for material FORming) Conference on Material Forming, Technical University of Cluj-Napoca, Cluj-Napoca, Romania, 27<sup>th</sup> 29<sup>th</sup> April 2005, pp. 627-630.
- 15. M. Khraisheh, **F. Abu-Farha** and P. Deshmukh, "Microstructure-Based Modeling and Simulation of Superplastic Forming Process", Proceedings of the 2004 European Conference on Superplastic Forming, Albi, France, 2004, pp. 75-80.
- 16. P. Deshmukh, N. Thuramalla, **F. Abu-Farha** and M. Khraisheh, "Integrated Approach to Optimization of Superplastic Forming", Proceedings of the Symposium on Advances in Superplasticity and Superplastic Forming, the 133<sup>rd</sup> TMS Annual Meeting and Exhibition, Charlotte, NC, March 2004, pp. 361-369.
- 17. **F. Abu-Farha**, P. Deshmukh, N. Thuramalla and M. Khraisheh, "Superplastic Forming: Stretching the Limits of Fabricating Medical Devices and Implants", Medical Device Materials: Proceedings of the ASM Materials & Processes for Medical Devices Conference, September 2003, Anaheim, CA, pp. 368-373.

## Presentations (Without a Technical Publication) and Posters:

- 1. D. Lowe, E. Orton, F. Abu-Farha [advisor], "Investigating the Post-Forming Properties of the AZ31B Magnesium Alloy Following Biaxial Stretching", Student poster presented at Materials Science and Technology 2011 Conference and Exhibition (MS&T'11), Columbus, OH, 16<sup>th</sup> 20<sup>th</sup> October 2011.
- 2. J. Curtin, N. Snyder, F. Abu-Farha [advisor], "Effects of Rolling Direction on the Limiting Strains in Mg AZ31B Sheets", Student poster presented at Materials Science and Technology 2011 Conference and Exhibition (MS&T'11), Columbus, OH, 16<sup>th</sup> 20<sup>th</sup> October 2011.
- 3. F. Abu-Farha [presenter], L.G. Hector, Jr., R. Verma, J. Curtin, N. Snyder, "Pneumatic Stretching Through Open Die Inserts for Constructing the FLDs of Lightweight Alloys at Elevated Temperatures", Presented at Materials Science and Technology 2011 Conference and Exhibition (MS&T'11), Columbus, OH, 16<sup>th</sup> 20<sup>th</sup> October 2011.
- 4. F. Abu-Farha [presenter], L.G. Hector, Jr., R. Verma, J. Curtin, N. Snyder, "Pneumatic Stretching Through Open Die Inserts for Constructing the FLDs of Lightweight Alloys at Elevated Temperatures", Presented at Materials Science and Technology 2011 Conference and Exhibition (MS&T'11), Columbus, OH, 16<sup>th</sup> 20<sup>th</sup> October 2011.
- 5. M. Albakri, F. Abu-Farha [presenter], M. Khraisheh, "Mechanical versus Pneumatic Stretching: Evaluation of Limiting Strains in Sheet Metals at Elevated Temperatures", Presented at the 06<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2011, Corvallis, OR, 13<sup>th</sup> 17<sup>th</sup> June 2011.
- 6. F. Abu-Farha [presenter], B. Deeter, "Sheet Orientation Effects on the Hot Formability Limits of Lightweight Alloys", Presented at the 06<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2011, Corvallis, OR, 13<sup>th</sup> 17<sup>th</sup> June 2011.
- 7. Fadi Abu-Farha [presenter], Louis G. Hector, Jr., and Paul E. Krajewski, "Forming Limit Curves for the AA5083 Alloy under QPF Conditions", Presented at the 2011 SAE World Congress, Detroit, MI, 12<sup>th</sup> 14<sup>th</sup> April 2011.
- 8. F. Abu-Farha [presenter], "Reverse Bulging in Hydro/Pneumatic Sheet Metal Forming Operations: Is It Worth It?", Presented at the 05<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2010, Erie, PA, 12<sup>th</sup> 15<sup>th</sup> October 2010.
- 9. F. Abu-Farha [presenter], Joshua Sabo and Craig Herring, "In Pursuit of an Integrated Methodology for Accurate Elevated Temperature and Superplastic Tensile Testing", Presented at the 05<sup>th</sup> International Manufacturing Science and Engineering Conference MSEC 2010, Erie, PA, 12<sup>th</sup> 15<sup>th</sup> October 2010.
- 10. F. Abu-Farha [presenter], L. Hector and M. Nazzal, "On the Formability of AA5083 at Elevated Temperatures by Pneumatic Stretching", Presented in the Symposium on Superplastic Forming at AeroMat 2010, Bellevue, WA, 21<sup>st</sup> 24<sup>th</sup> June 2010.

- 11. M. Nazzal [presenter], F. Jarrar and F. Abu-Farha, "Effects of Hydrostatic Pressure on Superplastic Deformation Stability", Presented in the Symposium on Superplastic Forming at AeroMat 2010, Bellevue, WA, 21<sup>st</sup> 24<sup>th</sup> June 2010.
- 12. M. Nazzal [presenter] and F. Abu-Farha, "Finite Element Simulations of a Hybrid Forming Process: Combined Deep Drawing and Superplastic Forming", Presented in the Symposium on Superplastic Forming at AeroMat 2010, Bellevue, WA, 21<sup>st</sup> 24<sup>th</sup> June 2010.
- 13. F. Abu-Farha [presenter], M. Nazzal and R. Curtis, "Towards an Improved Standard Methodology for Determining the Tensile Properties of Metallic Superplastic Materials", Presented at the 10<sup>th</sup> International Conference on Superplasticity in Advanced Materials, Seattle, WA, 29<sup>th</sup> June 02<sup>nd</sup> July 2009.
- 14. F. Abu-Farha [presenter], L. Hector and M. Nazzal, "On the Development of Viable Cruciform-Shaped Specimens: Towards Accurate Elevated Temperature Biaxial Testing of Lightweight Materials", Presented at the 10<sup>th</sup> International Conference on Superplasticity in Advanced Materials, Seattle, WA, 29<sup>th</sup> June 02<sup>nd</sup> July 2009.
- 15. F. Abu-Farha [presenter] and M. Nazzal, "On the Time-Saving Potentials of Reverse/Forward Superplastic Forming", Presented at the 10<sup>th</sup> International Conference on Superplasticity in Advanced Materials, Seattle, WA, 29<sup>th</sup> June 02<sup>nd</sup> July 2009.
- 16. Abu-Farha, F. [presenter], and Nazzal, M. A., "Alternative Validation Technique for Accurate Modelling of Hydro/ Pneumatic Forming Operations," AeroMat 2009, Dayton, OH, June 2009.
- 17. Abu-Farha, F. [presenter], and Nazzal, M. A., "A Numerical and Experimental Investigation of Reverse Bulging of Lightweight Superplastic Sheets," AeroMat 2009, Dayton, OH, June 2009.
- 18. F. Abu-Farha, L. Hector [presenter] and M. Khraisheh, "The Development of Viable Cruciform-Shaped Specimens for Accurate Biaxial Testing of Magnesium Alloys", Presented in the Symposium on Magnesium Technology at the TMS 2009 Annual Meeting and Exhibition, San Francisco, CA, 15<sup>th</sup> 19<sup>th</sup> February 2009.
- 19. F. S. Jarrar [presenter], F. K. Abu-Farha, L. G. Hector and M. K. Khraisheh, "Finite Element Simulation of Bulge Forming of Superplastic AA5083 Sheets under QPF Conditions", Presented at the 2008 AeroMAT Conference, Austin, Texas, June 2008.
- 20. F. Abu-Farha [presenter], M. Nazzal and M. Khraisheh, "Superplastic Forming of Lightweight Alloys: An Integrated Approach", Presented in the Symposium on Automotive and Ground Vehicles: Materials and Processes for Vehicles, at Materials Science and Technology 2007 Conference and Exhibition (MS&T'07), Detroit, MI, 16<sup>th</sup> - 20<sup>th</sup> September, 2007
- 21. F. Abu-Farha [presenter] and M. Khraisheh, "Post-Superplastic Forming Analysis under Different Loading Paths", Presented at the 18th AeroMat Conference & Exhibition, Baltimore, Maryland, 25<sup>th</sup> 28<sup>th</sup> June 2007.
- F. Abu-Farha, "On the Post-Superplastic Forming of the AZ31 Magnesium Alloy", Poster presented at the 136<sup>th</sup> TMS Annual Meeting and Exhibition, Orlando, FL, 25<sup>th</sup> February - 01<sup>st</sup> March 2007.

- 23. M. Khraisheh, F. Abu-Farha, M. Nazzal and Basil Darras, "Integrated Approach to Optimisation of Superplastic Forming of Advanced Materials", Poster presented at the 2006 NSF-DMII Grantees Conference, St. Louis, MO, 24<sup>th</sup> 27<sup>th</sup> July 2006.
- 24. F. Abu-Farha, "On the High Temperature Superplastic Deformation in the AZ31 Magnesium Alloy", Poster presented in the Student Poster Session at The 2006 NSF DMII Grantees Conference, St. Louis, Mo, 24<sup>th</sup> 27<sup>th</sup> July 2006.
- 25. F. Abu-Farha [presenter] and M. Khraisheh, "Observations on the High Temperature Tensile Testing of Superplastic Materials", Presented at the 3<sup>rd</sup> International Conference on Structural Stability and Dynamics (ICSSD), Orlando, FL, 20<sup>th</sup> 22<sup>nd</sup> June 2005.
- 26. F. Abu-Farha [presenter], "Constitutive Modeling of Anisotropy and Microstructural Evolution during Superplastic Deformation", Presented at the 3<sup>rd</sup> MIT Conference on Computational Fluid and Solid Mechanics, Cambridge, 14<sup>th</sup> – 17<sup>th</sup> June 2005.
- 27. F. Abu-Farha and M. Khraisheh, "Deformation Characteristics of AZ31 Magnesium Alloy Under Various Forming Temperatures and Strain Rates", Poster presented at the 8<sup>th</sup> ESAFORM (European Scientific Association for material FORming) Conference on Material Forming, Technical University of Cluj-Napoca, Cluj-Napoca, Romania, 27<sup>th</sup> 29<sup>th</sup> April 2005.
- 28. M. Khraisheh, F. Abu-Farha and M. Nazzal, "Constitutive Modelling, Optimisation & FE Simulation of Superplastic Forming Process", Poster presented at The 2005 NSF DMII Grantees Conference, Scottsdale, AZ, 3<sup>rd</sup> 6<sup>th</sup> January 2005.
- 29. P. Deshmukh, N. Thuramalla, F. Abu-Farha [presenter] and M. Khraisheh, "Integrated Approach to Optimization of Superplastic Forming", Presented in the Symposium on Advances in Superplasticity and Superplastic Forming, the 133<sup>rd</sup> TMS Annual Meeting and Exhibition, Charlotte, NC, 14<sup>th</sup> 18<sup>th</sup> March 2004.
- 30. F. K. Abu-Farha [presenter] and M. K. Khraisheh, "Analysis of Anisotropy During Superplastic Deformation", Presented at the Materials Science & Technology (MS&T 2003), Chicago, IL, 9<sup>th</sup> 12<sup>th</sup> November 2003.
- F. K. Abu-Farha and M. K. Khraisheh, "Constitutive Modeling of Deformation-Induced Anisotropy in Superplastic Materials", Poster presented at the 8<sup>th</sup> International Conference on Superplasticity in Advanced Materials, Oxford, UK, 28<sup>th</sup> – 30<sup>th</sup> July 2003.
- 32. N. V. Thuramalla, F. K. Abu-Farha and M. K. Khraisheh, "Multiscale-Stability analysis on Superplastic deformation", Poster presented in the poster session at the 132<sup>nd</sup> TMS Annual Meeting & Exhibition, San Diego, CA, 2<sup>nd</sup> 6<sup>th</sup> March 2003.

### **Patents:**

- 1. **F. Abu-Farha**, "Extruded Tubing via Friction Stir Forming", US Provisional Patent Application No. 61/547,148; Filed on the 14<sup>th</sup> October 2011.
- 2. **F. Abu-Farha**, J. Roth and O. Rawashdeh, "Controlled Balanced Biaxial Testing Apparatus Using a Self-Centring Four-Jaw Chuck", US Provisional Patent Application No. 61/090,633; Filed on the 21<sup>st</sup> August 2008.
- 3. **F. Abu-Farha**, J. Roth and G. Craig, "Quick-Mount Grips for Elevated & Cryogenic Temperature Tensile Testing", US Provisional Patent Application No. 61/088,489; Filed on the 13<sup>th</sup> August 2008.
- 4. **F. Abu-Farha** and M. Khraisheh, "Uniaxially-Driven Controlled Biaxial Testing Fixture", US Patent No. 7,712,379 B2; filed on the 14<sup>th</sup> May 2008, issued on the 11<sup>th</sup> May 2010.

### Reports to Sponsors:

- 1. **F. Abu-Farha**, "High Temperature Forming Limit Diagrams of Magnesium AZ31B Sheets Obtained by Pneumatic Stretching", contact: R. Verma, Manufacturing Systems Research Lab, L.G. Hector, Jr., Chemical Sciences and Materials Systems Lab., GM Research and Development Center, General Motors. Report approved on the 19<sup>th</sup> August 2011. (Report no.: R&D 12937).
- 2. **F. Abu-Farha**, "Elliptical Die Insert Technique for Generating High Temperature AA5083 Aluminum Formability Curves", contact: L.G. Hector, Jr., Chemical Sciences and Materials Systems Lab., GM Research and Development Center, General Motors. Report approved on the 02<sup>nd</sup> August 2010. (Report no.: CL-10-085-CML).
- 3. **F. Abu-Farha**, "New Cruciform Geometries for Elevated Temperature Biaxial Testing of AZ31B Magnesium", contact: L.G. Hector, Jr., Chemical Sciences and Materials Systems Lab., GM Research and Development Center, General Motors. Report approved on the 08<sup>th</sup> April 2009. (Report no.: CL-09-001-CML).
- 4. F. Jarrar, **F. Abu-Farha**, M. Khraisheh, "Simulation of AA5083 Bulge Forming with a New Hardening/Softening Material Model under QPF Conditions", contact: L.G. Hector, Jr., Chemical Sciences and Materials Systems Lab., GM Research and Development Center, General Motors. Report approved on the 01<sup>st</sup> of September 2008. (Report no.: CL-08-275-MPL).

# **Book Chapters:**

1. **F. Abu-Farha** and R. Curtis, "Standards for Uniaxial Tensile Testing of Superplastic Materials", Chapter 2 of the Book "Superplastic Forming of Advanced Metallic Materials: Methods and Applications", Editor: Dr. Gillo Giuliano, Woodhead Publishing Limited, Cambridge, UK, July 2011. ISBN-13: 978 1 84569 753 2.