

## PEER-REVIEWED PUBLICATIONS

1. Nonlinear acoustic crack detection in thermoelectric wafers  
J. Greenhall, S. Grutzik, A. Graham, D.N. Sinha, and **C. Pantea**  
*Mechanical Systems and Signal Processing*, vol. 139, (2020), 106598.
2. Ultrasonic Bessel beam generation from radial modes of piezoelectric discs  
V.K. Chillara, E.S. Davis, **C. Pantea**, and D.N. Sinha  
*Ultrasonics*, vol. 96, no. 7, (2019), pp. 140-148.
3. Full-waveform inversion and least-squares reverse-time migration imaging of collimated ultrasonic-beam data for high-resolution wellbore integrity monitoring  
Y. Chen, K. Gao, E.S. Davis, D.N. Sinha, **C. Pantea**, and L. Huang  
*Appl. Phys. Lett.*, vol. 131, issue 7, (2018), 071903.
4. Radial modes of laterally stiffened piezoelectric disc transducers for ultrasonic collimated beam generation  
V.K. Chillara, **C. Pantea**, and D.N. Sinha  
*Wave Motion*, vol. 76, (2018), pp. 19-27.
5. Low-frequency ultrasonic Bessel-like collimated beam generation from radial modes of piezoelectric transducers  
V.K. Chillara, **C. Pantea**, and D.N. Sinha  
*Appl. Phys. Lett.*, vol. 110, issue 6, (2017), 064101.
6. Acoustic Characterization of Fluorinert FC-43 Liquid with Helium Gas Bubbles: Numerical Experiments  
C. Vanhille, **C. Pantea**, and D.N. Sinha  
*Shock and Vibration*, vol. 2017, (2017), 2518168.
7. High frequency signal acquisition using a smartphone in an undergraduate teaching laboratory: Applications in ultrasonic resonance spectra  
B.T. Sturtevant, **C. Pantea**, and D.N. Sinha  
*J. Acoust. Soc. Am.*, vol. 140, issue 4, (2016), pp. 2810.
8. Resonant Ultrasound Spectroscopy Studies of Berea Sandstone at High Temperature  
E.S. Davis, B.T. Sturtevant, D.N. Sinha, and **C. Pantea**  
*J. Geophys. Res.: Solid Earth*, vol. 121, issue 9, (2016), pp. 6401.
9. Measured sound speeds and acoustic nonlinearity parameter in liquid water up to 523 K and 14 MPa  
B.T. Sturtevant, **C. Pantea**, D.N. Sinha  
*AIP Advances*, vol. 6, issue 7, (2016), pp. 075310.
10. The acoustic nonlinearity parameter in Fluorinert up to 381 K and 13.8 MPa  
B.T. Sturtevant, **C. Pantea**, D.N. Sinha  
*J. Acoust. Soc. Am.*, vol. 138, issue 1, (2015), pp. EL31-35.
11. Broadband Unidirectional Ultrasound Propagation Using Sonic Crystal and Nonlinear Medium  
D.N. Sinha and **C. Pantea**  
*Emerging Materials Research*, vol. 2, issue EMR3, (2013), pp. 117-126.
12. Evaluation of the Transmission Line Model for Couplant Layer Corrections in Pulse-Echo Measurements  
B.T. Sturtevant, **C. Pantea**, D.N. Sinha  
*IEEE Trans. Ultrason., Ferroelect., Freq. Contr.*, vol. 60, No. 5, (2013), pp. 943-953

13. Determination of acoustical nonlinear parameter  $\beta$  of water using the finite amplitude method  
**C. Pantea**, C.F. Osterhoudt, D.N. Sinha  
*Ultrasonics*, vol. 53, no. 5, (2013), pp. 1012-1019.
14. An acoustic resonance measurement cell for liquid property determinations up to 250°C  
 B.T. Sturtevant, **C. Pantea**, D.N. Sinha  
*Rev. Sci. Instrum.*, vol. 83, no. 11, (2012), art. no. 115106.
15. Creating a collimated ultrasound beam in highly attenuating fluids  
 B. Raeymaekers, **C. Pantea**, D.N. Sinha  
*Ultrasonics*, vol. 52, no. 4, (2012), pp. 564-570.
16. Manipulation of diamond nanoparticles using bulk acoustic waves  
 B. Raeymaekers, **C. Pantea**, D.N. Sinha  
*J. Appl. Phys.*, vol. 109, (2011), pp. 014317.
17. High-pressure neutron diffraction studies at LANSCE  
 Y. Zhao, J. Zhang, H. Xu, K.A. Lokshin, D. He, J. Qian, **C. Pantea**, L.L. Daemen, S.C. Vogel, Y. Ding, J. Xu  
*Appl. Phys. A: Mater. Sci. & Processing*, vol. 99, no. 3, (2010), pp. 585-599.  
 Special Issue: "Emerging Applications of Neutron Scattering in Materials Science and Engineering"
18. Elastic constants of osmium between 5 and 300 K  
**C. Pantea**, I. Stroe, H. Ledbetter, J.B. Betts, Y. Zhao, L.L. Daemen, H. Cynn, A. Migliori  
*Phys. Rev. B*, vol. 80, no. 2, (2009), pp. 024112-1-10.
19. Bulk modulus of osmium, 4-300 K  
**C. Pantea**, I. Mihut, H. Ledbetter, J.B. Betts, Y. Zhao, L.L. Daemen, H. Cynn, A. Migliori  
*Acta Mater.*, vol. 57, iss. 2, (2009) p. 544-548
20. Diamond's elastic stiffnesses from 322 K to 10 K  
 A. Migliori, H. Ledbetter, R.G. Leisure, **C. Pantea**, J.B. Betts  
*J. Appl. Phys.*, vol. 104, no. 5, (2008), pp. 053512-1-4
21. Structure of diamond-silicon carbide nanocomposites as a function of sintering temperature at 8 GPa  
 L. Balogh, S. Nauyoks, T. W. Zerda, **C. Pantea**, S. Stelmakh, B. Palosz, T. Ungar,  
*Mat. Sci. Eng. A*, vol. 487, no. 1-2, (2008), pp. 180-8.
22. Direct measurement of spin correlation using magnetostriction  
 V.S. Zapf, V.F. Correa, P. Sengupta, C.D. Batista, M. Tsukamoto, N. Kawashima, P. Egan, **C. Pantea**, A. Migliori, J.B. Betts, M. Jaime, A. Paduan-Filho  
*Phys. Rev. B*, vol. 77, no. 2, (2008), pp. 020404(R)-1-4
23. Osmium's Debye temperature  
**C. Pantea**, I. Stroe, H. Ledbetter, J.B. Betts, Y. Zhao, L.L. Daemen, H. Cynn, A. Migliori  
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24. High-Temperature Phase Transitions in CsH<sub>2</sub>PO<sub>4</sub> under Ambient and High-Pressure Conditions: A Synchrotron X-ray Diffraction Study  
 C.E. Botez, J.D. Hermosillo, J. Zhang, J. Qian, Y. Zhao, J. Majzlan, R.R. Chianelli, **C. Pantea**  
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25. Alpha-plutonium's polycrystalline elastic constants over its full temperature range  
A. Migliori, **C. Pantea**, H. Ledbetter, J. B. Betts, J. E. Mitchell, M. Ramos, F. Freibert, D. Dooley, S. Harrington, C. Mielke  
*J. Acoust. Soc. Am.*, vol. 122, no. 4, (2007), pp. 1994-2001.
26. Temperature and time-dependence of the elastic moduli of Pu and Pu-Ga alloys  
A. Migliori, I. Mihut, J.B. Betts, M. Ramos, C. Mielke, **C. Pantea**, D. Miller  
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27. Investigation of relaxation of nanodiamond surface in real and reciprocal spaces  
B. Palosz, **C. Pantea**, E. Grzanka, S. Stelmakh, Th. Proffen, T.W. Zerda, W. Palosz  
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28. Microstructure of diamond-SiC nanocomposites determined by X-ray line profile analysis  
J. Gubicza, T. Ungar, Y. Wang, G.A. Voronin, **C. Pantea**, T.W. Zerda  
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29. Pressure-induced elastic softening of monocrystalline zirconium tungstate at 300 K  
**C. Pantea**, A. Migliori, P. B. Littlewood, Y. Zhao, H. Ledbetter, J. C. Lashley, T. Kimura, J. Van Duijn, and G. R. Kowach  
*Phys. Rev. B*, vol. 73, no. 21, (2006), art. no. 214118.
30. Evidence for a Structural Transition to a Superprotonic CsH<sub>2</sub>PO<sub>4</sub> Phase Under High Pressure  
C. E. Botez, R. R. Chianelli, J. Zhang, J. Qian, Y. Zhao, J. Majzlan, **C. Pantea**  
in *Materials in Extreme Environments*, edited by C. Mailhot, P.B. Saganti, D. Ila  
(*Mater. Res. Soc. Symp. Proc. 929E*, Warrendale, PA, 2006), 0929-II02-01.
31. Digital ultrasonic pulse-echo overlap system and algorithm for unambiguous determination of pulse transit time  
**C. Pantea**, D.G. Rickel, A. Migliori, J. Zhang, Y. Zhao, S. El-Khatib, R.G. Leisure, B. Li  
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32. Kinetics of the reaction between diamond and silicon at high pressure and temperature  
**C. Pantea**, G.A. Voronin, T.W. Zerda  
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33. Kinetics of SiC formation during the high P-T reaction between diamond and silicon  
**C. Pantea**, G.A. Voronin, T.W. Zerda, J. Zhang, L. Wang, Y. Wang, T. Uchida, Y. Zhao  
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34. Experimental Constraints on the Phase Diagram of Zirconium Metal  
J. Zhang, Y. Zhao, **C. Pantea**, J. Qian, L.L. Daemen, P.A. Rigg, R.S. Hixson, C.W. Greeff, G.T. Gray III, Y. Yang, L. Wang, Y. Wang, T. Uchida  
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35. Thermal equations of state of  $\alpha$ ,  $\beta$ , and  $\omega$  phases of zirconium  
Y. Zhao, J. Zhang, **C. Pantea**, J. Qian, L.L. Daemen, P.A. Rigg, R.S. Hixson, G.T. Gray III, Y. Yang, L. Wang, Y. Wang, T. Uchida  
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36. Yield Strength of  $\alpha$ -Silicon Nitride at High Pressure and High Temperature  
J. Qian, **C. Pantea**, J. Zhang, L.L. Daemen, Y. Zhao, M. Tang, T. Uchida, Y. Wang  
*J. Am. Ceram Soc.*, vol. 88, no. 4, (2005), pp. 903.
37. Microstructure of nanocrystalline diamond powders studied by powder diffractometry  
B. Palosz, E. Grzanka, **C. Pantea**, T.W. Zerda, Y. Wang, J. Gubicza, T. Ungar  
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38. Thermal equation of state of osmium: a synchrotron x-ray diffraction study  
G.A. Voronin, **C. Pantea**, T.W. Zerda, L. Wang, Y. Zhao  
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39. Size and shape of crystallites and internal stresses in carbon blacks  
T. Ungar, J. Gubicza, G. Tichy, **C. Pantea**, T.W. Zerda  
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40. Structural influence of erbium centers on silicon nanocrystal phase transitions  
R.A. Senter, **C. Pantea**, Y. Wang, H. Liu, T.W. Zerda, J.L. Coffey  
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41. Graphitization of diamond of different sizes at high pressure-high temperature  
J. Qian, **C. Pantea**, J. Huang, T.W. Zerda, Y. Zhao  
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**C. Pantea**, J. Gubicza, T. Ungar, G.A. Voronin, N.H. Nam, T.W. Zerda  
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43. Powder Neutron Diffraction of Wustite (Fe<sub>0.93</sub>O) to 12 GPa using large moissanite anvils  
J. Xu, Y. Ding, S.D. Jacobsen, H.K. Mao, R.J. Hemley, J. Zhang, J. Qian, **C. Pantea**, S.C. Vogel, D.J. Williams, Y. Zhao  
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44. Enhancement of fracture toughness in nanostructured diamond-SiC composites  
Y. Zhao, J. Qian, L.L. Daemen, **C. Pantea**, J. Zhang, G.A. Voronin, T.W. Zerda  
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46. In situ x-ray diffraction study of germanium at pressures up to 11GPa and temperatures up to 950K  
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47. Dislocation density and graphitization of diamond crystals  
**C. Pantea**, J. Gubicza, T. Ungar, G.A. Voronin, T.W. Zerda  
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48. Microstructure of carbon blacks determined by X-ray diffraction profile analysis  
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**C. Pantea**, J. Qian, G.A. Voronin, T.W. Zerda  
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G. Voronin, **C. Pantea**, T.W. Zerda  
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53. A study on the electrodic process by Electrochemical Impedance Spectroscopy (Studiul procesului electrodic prin Spectroscopie de Impedanta Electrochimica)  
F. Kormos, L. Sziraki, **C. Pantea**  
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54. Enzimatic determination of urea in animal-origin whole blood and blood serum (Determinarea enzimatica a ureei din sange integral si ser sanguin de provenienta animala)  
I. Tarsiche, F. Kormos, **C. Pantea**  
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55. Redox sensors based on semiconductor film (Félvezető redoxi szenzor)  
F. Kormos, **C. Pantea**  
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56. Raman spectroscopic investigations of the  $x\text{CuO}\cdot(1-x)[3\text{B}_2\text{O}_3\cdot\text{K}_2\text{O}]$  glasses  
D. Maniu, I. Ardelean, T. Iliescu, **C. Pantea**  
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#### **BOOK CHAPTER**

Development of high P-T neutron diffraction at LANSCE  
Y. Zhao, D. He, J. Qian, **C. Pantea**, K.A. Lokshin, J. Zhang, L.L. Daemen  
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#### **LANL INTERNAL PUBLICATION**

Filling the Gap in Plutonium Properties. Studies at Intermediate Temperatures and Pressures  
A. Migliori, A.J. Hurd, Y. Zhao and **C. Pantea**  
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#### **PATENTS**

1. High-pressure, high-temperature hollow sphere acoustic pressure sensor – *United States Patent US10502648*, Dec 10, 2019
2. High-temperature, high pressure acoustic resonance cell – *United States Patent US10352907*, Jul 16, 2019
3. Acoustic imaging of objects in optically opaque fluids – *United States Patent US10331025*, Jun 25, 2019
4. Apparatus and method for acoustic monitoring of steam quality and flow – *United States Patent US10309932*, Jun 4, 2019
5. Methods for measuring properties of multiphase oil-water-gas mixtures – *United States Patent US10088590*, Oct 2, 2018
6. Broadband unidirectional ultrasound propagation – *United States Patent US9843400*, Dec 12, 2017

7. Apparatus and method for visualization of particles suspended in a fluid and fluid flow patterns using ultrasound - *European Patent EP2612113*, Nov 16, 2016
8. Apparatus and method for acoustic monitoring of steam quality and flow – *United States Patent US9442094*, Sep 13, 2016
9. Acoustic source for generating an acoustic beam – *United States Patent US9354346*, May 31, 2016
10. Device and method for generating a collimated beam of acoustic energy in a borehole - *European Patent EP2577357*, Sep 02, 2015
11. System and method for sonic wave measurements using an acoustic beam source - *United States Patent US9103944*, Aug 11, 2015
12. Device and method for generating a collimated beam of acoustic energy in a borehole - *European Patent EP2577358*, Jun 17, 2015
13. Device and method for generating a beam of acoustic energy from a borehole, and applications thereof - *European Patent EP2297595*, May 21, 2014
14. Device and method for generating a beam of acoustic energy from a borehole, and applications thereof - *United States Patent US8559269*, Oct 15, 2013
15. Device and method for generating a beam of acoustic energy from a borehole, and applications thereof - *United States Patent US8547791*, Oct 1, 2013
16. Device and method for generating a beam of acoustic energy from a borehole, and applications thereof - *United States Patent US8547790*, Oct 1, 2013
17. System for generating a beam of acoustic energy from a borehole, and applications thereof - *United States Patent US8259530*, Sep 4, 2012
18. System for generating a beam of acoustic energy from a borehole, and applications thereof - *United States Patent US8233349*, Jul 31, 2012
19. Device and method for generating a beam of acoustic energy from a borehole, and applications thereof - *United States Patent US7839718*, Nov 23, 2010.

### **CONFERENCE PROCEEDINGS**

1. Beam Profile Characterization for Thickness Mode Transducers versus Radial Modes  
E. S. Davis, V. Chillara, C. Chavez, D. N. Sinha and **C. Pantea**  
*2019 IEEE International Ultrasonics Symposium (IUS)*, Glasgow, United Kingdom, 2019, pp. 1663-1665
2. Development of a 3D Acoustic Borehole Integrity Monitoring System  
C. Chavez, E. S. Davis, V. Chillara, D. N. Sinha and **C. Pantea**  
*2019 IEEE International Ultrasonics Symposium (IUS)*, Glasgow, United Kingdom, 2019, pp. 1666-1669
3. Collimated acoustic beams from radial modes of piezoelectric disc transducers  
V.K. Chillara, E.S. Davis, **C. Pantea** and D.N. Sinha  
*AIP Conf. Proc.*, vol. 2102, (2019), pp. 040013.
4. Temperature-dependent elasticity of common reservoir rocks  
E.S. Davis, D.N. Sinha, **C. Pantea**  
*52nd U.S. Rock Mechanics/Geomechanics Symposium*, 17-20 June, Seattle, Washington, 2018. American Rock Mechanics Association
5. Low-frequency ultrasonic collimated beam generation from piezoelectric discs  
V.K. Chillara, **C. Pantea** and D.N. Sinha  
*Proceedings of Meetings on Acoustics (POMA)*, vol. 32(1), (2017), pp. 045013.

6. Coupled electromechanical modeling of piezoelectric disc transducers for low-frequency ultrasonic collimated beam generation  
V.K. Chillara, **C. Pantea** and D.N. Sinha  
*Proceedings of SPIE*, vol. 10170, (2017), Article no. 1017024.
7. Ultrasonic Sensing for Noninvasive Characterization of Oil-water-gas Flow in a Pipe  
V.K. Chillara, B.T. Sturtevant, **C. Pantea** and D.N. Sinha  
43rd Annual Review of Progress in Quantitative Nondestructive Evaluation, Volume 36  
*AIP Conf. Proc.*, vol. 1806, (2017), pp. 090014.
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**C. Pantea**, D.N. Sinha  
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9. Broadband directional ultrasound propagation using sonic crystal and nonlinear medium  
D.N. Sinha, **C. Pantea**  
*Proceedings of Meetings on Acoustics (POMA)*, vol. 19, (2013), pp. 065047.
10. Determination of the Acoustic Nonlinearity Parameter in Liquid Water up to 250°C and 14 MPa  
B.T. Sturtevant, **C. Pantea**, D.N. Sinha  
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11. Acoustic Nonlinearity in Fluorinert FC-43  
**C. Pantea**, D.N. Sinha, C.F. Osterhoudt, P.C. Mombourquette  
*Proceedings of Meetings on Acoustics (POMA)*, vol. 6, (2009), pp. 045005-1-14.
12. Nano-Diamond compressibility at pressures up to 85 GPa  
**C. Pantea**, J. Zhang, J. Qian, Y. Zhao, A. Migliori, E. Grzanka, B. Palosz, Y. Wang, T.W. Zerda, H. Liu, Y. Ding, P.W. Stephens and C.E. Botez  
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### **ORAL PRESENTATIONS**

1. Development of a Low Frequency Collimated Acoustic Beam for Borehole Integrity Monitoring  
**C. Pantea**, E.S. Davis, V. Chillara, J.J. Greenhall, C.A. Chavez, D.N. Sinha  
2019 IEEE International Ultrasonics Symposium, Glasgow, Scotland, 6-9 October 2019
2. Acoustics-based 3-Dimensional Temperature Gradient Determination in Paraffin Wax  
**C. Pantea**, J. Greenhall, E.S. Davis, C. Chavez, D. Zerkle  
177<sup>th</sup> Meeting of the Acoustical Society of America, Louisville, KY, 13-17 May 2019
3. Ultrasonic techniques for measuring physical properties of fluids in harsh environments  
**C. Pantea**  
Keithley Award Session, APS March Meeting 2016, Baltimore, MD, 14-18 Mar 2016
4. Nuclear material identification using resonant ultrasound spectroscopy  
**C. Pantea**, T.A. Saleh, A. Migliori, J.B. Betts, E.P. Luther, D.B. Byler  
167<sup>th</sup> Meeting of the Acoustical Society of America, Providence, RI, 5-9 May 2014
5. Broad-band Acoustic Low Frequency Collimated Beam for Ultrasonic Imaging  
**C. Pantea** and D.N. Sinha  
21<sup>st</sup> International Congress on Acoustics, ICA 2013, Montreal, Canada, 2-7 June 2013
6. Acoustical Filters and Nonlinear Acoustic Wave Propagation in Liquids  
**C. Pantea** and D.N. Sinha  
161<sup>st</sup> Meeting of the Acoustical Society of America, Seattle, WA, 23-27 May 2011

7. Acoustical shock formation in highly nonlinear fluids  
**C. Pantea** and D.N. Sinha  
 Joint 159<sup>th</sup> ASA Meeting and Noise-Con 2010, Baltimore, MD, 19-23 April 2010
8. Nonlinear Acoustical Beam Formation and Beam Profiles in Fluids  
**C. Pantea** and D.N. Sinha  
 158<sup>th</sup> Meeting of the Acoustical Society of America, San Antonio, TX, 26-30 Oct 2009
9. Acoustic Nonlinearity in Fluorinert FC-43  
**C. Pantea**, D.N. Sinha, C.F. Osterhoudt, P.C. Mombourquette  
 157<sup>th</sup> Meeting of the Acoustical Society of America, Portland, OR, 18-22 May 2009
10. Acoustic nonlinear beam formation and imaging  
**C. Pantea**  
 Texas Christian University, Department of Physics and Astronomy, Fort Worth, TX,  
 January 23, 2009
11. Negative-thermal-expansion  $ZrW_2O_8$ . Elasticity and pressure.  
**C. Pantea**, A. Migliori, P. B. Littlewood, Y. Zhao, H. Ledbetter, J. C. Lashley, T.  
 Kimura, J. Van Duijn, and G. R. Kowach  
 APS March Meeting 2007, March 5-9, Denver, CO.
12. Osmium's full elastic tensor between 5K and 300K  
**C. Pantea**  
 152<sup>nd</sup> Meeting (4<sup>th</sup> joint meeting of the Acoustical Society of America and the Acoustical  
 Society of Japan), Honolulu, Hawaii, 28 November-2 December 2006
13. Pressure-induced elastic softening of monocrystalline zirconium tungstate at 300K  
**C. Pantea**  
 MSCookies and Tea, LANL, August 2<sup>nd</sup>, 2006
14. Nano-Diamond compressibility at pressures up to 85 GPa  
**C. Pantea**, J. Zhang, J. Qian, Y. Zhao, A. Migliori, E. Grzanka, B. Palosz, Y. Wang,  
 T.W. Zerda, H. Liu, Y. Ding, P.W. Stephens and C.E. Botez  
 NSTI Nanotech 2006, May 7-11, Boston, MA.
15. Digital ultrasonic pulse-echo overlap system and algorithm for unambiguous  
 determination of pulse transit time  
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 APS March Meeting 2006, March 13-17, Baltimore, MD.
16. Unusual compressibility in the negative-thermal-expansion material  $ZrW_2O_8$   
**C. Pantea**, A. Migliori, P. B. Littlewood, Y. Zhao, H. Ledbetter, T. Kimura, J. Van  
 Duijn, G. R. Kowach  
 ICAM/I2CAM Annual Conference on Frontiers in Complex Adaptive Matter & Satellite  
 Events  
 November 8-12, 2005, Bishop's Lodge, Santa Fe, NM
17. Nano-Diamond compressibility at pressures up to 85 GPa  
**C. Pantea**, J. Zhang, J. Qian, Y. Zhao, B. Palosz, T.W. Zerda  
 Stewardship Science Academic Alliances (SSAA) Program Symposium  
 March 29-31, 2004, Albuquerque, NM.
18. Phase-coherent pulse-echo ultrasound in a SiC anvil pressure cell  
**C. Pantea**, D.G. Rickel, R.G. Leisure, A. Migliori, Y. Zhao  
 Stewardship Science Academic Alliances (SSAA) Program Symposium  
 March 29-31, 2004, Albuquerque, NM.



19. Diamond Composites and control of graphitization  
**C. Pantea**, J. Qian, G.A. Voronin, T.W. Zerda, Y. Zhao  
Industrial Materials For The Future (IMF), Annual Review Meeting  
June 23-25, 2003, Golden, CO.
20. Structure Study of Diamond-SiC Composites Obtained Under High Pressure-High Temperature Conditions  
**C. Pantea**, G.A. Voronin, T.W. Zerda, J. Qian, Y. Zhao  
APS March Meeting 2003, March 3-7, Austin, TX.
21. Diamond-silicon reaction under high pressure - high temperature conditions  
**C. Pantea**, G.A. Voronin, T. W. Zerda  
MRCEDM Research Festival 2002, April 5, UTA, Arlington, TX.
22.  $\beta$ -SiC formation on diamond crystals under high pressure-high temperature conditions  
**C. Pantea**, G.A. Voronin, T. W. Zerda  
TSAPS Fall Meeting 2001, October 4-6, TCU, Fort Worth, TX.
23. X-ray diffraction study of diamond-graphite phase transition at high pressures and temperatures  
**C. Pantea**, J. Qian, T. W. Zerda  
TSAPS Fall Meeting 2000, October 27-29, Rice University, Houston, TX.