

Vitae for Charles C. Agosta

NAME: Charles C. Agosta

ADDRESS:

Clark University
Department of Physics
950 Main St.
Worcester, MA 01610

Phone: (508) 793-7736

FAX: (508) 793-8861

email: cagosta@clarku.edu

EDUCATION

Wesleyan University

1975–1980

B.A. 1980

Duke University

1980–1986

Ph.D. 1986

M.A. 1982

C. Agosta is a low temperature experimental physicist who was originally trained to study the properties of fluids at very low temperatures. His present research interests are lower dimensional superconductors in very high magnetic fields and heat transfer in gas boundary layers.

Given his deep interest in complicated instrumentation, he and his students have developed a pulsed magnetic field laboratory where experiments are performed in one of the highest magnetic fields available at any university in the United States. The apparatus uses some of the latest technology for high power electrical energy storage and switching.

His group studies anisotropic conducting materials at the extremes of parameter space, including temperature, pressure, and magnetic field to understand the relation of their chemical properties to correlated electron properties such as superconductivity, spin density waves, charge density waves, and the quantum Hall effect. Most of his measurements are made with an rf penetration depth technique developed in his laboratory and particularly well suited to the extreme conditions created in his laboratory. At his laboratory he can increase the magnetic field much above the level necessary to quench the superconducting or other correlated electron state to observe quantum oscillations and probe the Fermi surface. In this way, he can explore the fundamental properties of the charge carriers and test current theories of correlated electrons.

Agosta is also CEO and co-founder of Machflow Energy, Inc., a clean-tech company that is developing highly innovative heat transfer technologies revolutionizing air conditioning and related applications. They have created a disruptive Bernoulli Principle-based heat pump that works in a closed cycle using noble gasses that have no adverse effects on the environment, such as global warming, and avoids high pressures and associated compressors. The technology can be applied to heating and cooling applications from the scale of bio-chips up to buildings. Machflow is funded by Kleiner Perkins and prominent angel investors.

He teaches many of the core courses in the Physics Dept., but specializes in two signature courses Electronics and The Technology of Renewable Energy.

PROFESSIONAL EXPERIENCE

Selected to head the technical/innovation section of the Institute for Energy and Sustainability, a joint project of Clark University and Worcester Polytechnic Institute, 2010-

Chair of GIMS part of the American Physical Society, 2008-2009

Chair of Physics, Clark University, 2007-2010

Chair Elect of of GIMS part of the American Physical Society, 2007

Full Professor of Physics, Clark University, 2006-

Elected to the Executive committee of the Group on Instrumentation and Measurement (GIMS) of the American Physical Society, 2002-

Member of the Users' Committee of the National High Magnetic Field Laboratory 2002-

Visiting Scientist, National High Magnetic Field Laboratory, Los Alamos National Laboratory, February, 1999.

Chair of the Users' Committee of the National High Magnetic Field Laboratory 1998-2000

Associate Professor of Physics, Clark University, 1997-

Member of the Users' Committee of the National High Magnetic Field Laboratory 1996-2000

Visiting Scientist, National High Magnetic Field Laboratory, Florida State University and Los Alamos National Laboratory, February - April, 1995.

Visiting Professor, Katholic University of Leuven, Belgium, May-June 1994.

Assistant Professor of Physics, Clark University, 1991 –1997

Visiting Scientist, Francis Bitter National Magnet Laboratory, MIT 1991 –1993

IBM Postdoctoral Fellow, Francis Bitter National Magnet Laboratory, MIT, 1989–1991.

Research Associate, Harvard University, 1986 – 1989 with Isaac Silvera.

Research Assistant in critical phenomena at low temperatures, Duke University, 1982–1986, Professor Horst Meyer, thesis advisor.

Research assistant, Wesleyan University, 1979–1980, Professor Robert Berhinger, advisor.

Grants received

Over 1.1M has been raised in basic research grants from the NSF, DOE and DOD. Co-PI for a \$500,000 education grant.

Spin off

Launched a privately funded company at Clark University to develop a new kind of heat pump. Has raised \$2.9M to date

Patents

7 full patent applications have been submitted and two provisionals.

Contracts

Approximately \$4000 of work has been done in our lab for FlexCon Inc. of Spencer.

Students

David Howe	ABD 1996	Agilent Technologies, Andover MA.
Charles Mielke	PhD 1996	Staff, NHMFL, Los Alamos.
Serguei Ivanov	PhD 1997	Director of Engineering, Machflow Energy Inc.
Marcus Bennett	MA 1997	Graduate student University of Michigan PhD 2008.
Geoffery Esper	MA 1999	High school teacher.
Tom Coffey	PhD 2003	R&D, General Electric ,Pittsburg
Zeynel Bayindir	PhD 2003	Research Scientist, Dalhousie University.
Charles Gatete	MA 2004	Professor, National University of Rwanda.
Vincent Ciaramentaro	MA 2005	Physics High School Teacher, Watertown, MA.
Catalin Martin	PhD 2005	Post-doc, Ames Laboratory.
Izabela Mihut	PhD 2005	Assistant Professor, WPI.
Kyuil Cho	PhD 2009	Post-doc, NHMFL Florida State University.
Mike Viotti	MA 2009	
Laurel Winter	BA 2009	Grad Student at Florida State University

Publications

In prep

Submitted

William A. Coniglio, Laurel E. Winter, Kyuil Cho, and C. C. Agosta, B. Fravel, and L. K. Montgomery, "Unusual phase diagram and FFLO signature in λ -(BETS)2GaCl4 from RF penetration depth measurements," submitted to PRB. arXiv/1003.6088v1

T. Coffey, C. Martin, C. C. Agosta, and M. Tokumoto, "A bulk 2D Pauli Limited Superconductor," submitted to *Phys. Rev. Lett.*, cond-mat/0303341.

William A. Coniglio, Laurel E. Winter, Chris Rea, Kyuil Cho, and C. C. Agosta, "Improvements to the Tunnel Diode Oscillator technique for high frequencies and pulsed magnetic fields with digital acquisition," Submitted to *RSI*. arXiv/1003.5233

In Print

K. Cho, B. E. Smith, W. A. Coniglio, L. E. Winter, C. C. Agosta, and J. A. Schlueter, "Upper critical field study in the organic superconductor β "-(ET)₂SF₅CH₂CF₂SO₃: Possibility of the Fulde-Ferrell-Larkin-Ovchinnikov state," *Phys. Rev.B* **79**, 220507(R) (2009). (picked as an Editor's Suggestion)

C. Martin, K. Cho, I. Mihut, T. Coffey, C. C. Agosta, S. W. Tozer, H. A. Radovan, E. C. Palm, T. P. Murphy and J. A. Schlueter, "New Results for Superconductivity in κ -(BEDT-TTF)₂Cu(NCS)₂ When an Applied Magnetic Field is Aligned Parallel to the Conducting Planes," *J. Low Temp. Phys.* Published on Line (2007).

<http://springerlink.metapress.com/content/j5q006044k782662/fulltext.pdf>

H. A. Radovan, T. P. Murphy, E. C. Palm, S. W. Tozer, J. C. Cooley, I. Mihut, and C. C. Agosta, "Abrikosov-to-Josephson vortex lattice crossover in heavy fermion CeCoIn₅," *Philosophical Magazine* **86**, 3569 (2006).

I. Mihut, C. C. Agosta, C. Martin, C. H. Mielke, T. Coffey, M. Tokumoto, M. Kurmoo, J. A. Schlueter, P. Goddard, and N. Harrison, "Incoherent Bragg reflection and Fermi Surface Hot Spots in κ -(BEDT-TTF)₂Cu(NCS)₂," *Phys. Rev. B* **73**, 125118 (2006).

C. C. Agosta, C. Martin, H. A. Radovan, E. C. Palm, T. P. Murphy, S. W. Tozer, J. C. Cooley, J. A. Schlueter, and C. Petrovic, "Penetration depth studies of organic and heavy fermion superconductors in the Pauli paramagnetic limit," *J. Phys. and Chem. of Solids* **67**, 586 (2006).

C. Martin, C. C. Agosta, S. W. Tozer, H. A. Radovan, E. C. Palm, T. P. Murphy, and J. L. Sarrao "Evidence for the FFLO state in CeCoIn₅ from penetration depth measurements" *Phys. Rev. B* **71**, 020503 (2005).

C. Martin, C. C. Agosta, S.W. Tozer, H. A. Radovan, T. Kinoshota, and M. Tokumoto "Critical field and Shubnikov-de Haas oscillations of κ -(BEDT-TTF)₂Cu(NCS)₂ under pressure" *J. Low Temp. Phys.* **138**, 1025 (2005).
<http://springerlink.metapress.com/content/m78w8236h6231664/fulltext.pdf>

I. Mihut, C. C. Agosta, C. H. Mielke, and M. Tokumoto, "The Study of the Magnetic Breakdown Effect as a Function of Angle in the Organic Conductor κ -(BEDT-TTF)₂Cu(NCS)₂ in High Magnetic Fields," presented at the Physical Phenomena in High Magnetic Fields IV, Albuquerque NM, ed. Zack Fisk, World Scientific, 463, (2002).

C. C. Agosta, T. Coffey, Z. Bayindir, I. Mihut, C. Martin, and M. Tokumoto, "Resistivity And Penetration Depth Measurements Of Organic Superconductors In High Magnetic Fields Using A Tunnel Diode Oscillator," presented at the Physical Phenomena in High Magnetic Fields IV, Albuquerque NM, ed. Zack Fisk, World Scientific, 333, (2002).

C. Mielke, J. Singleton, M-S. Nam, N. Harrison, C. C. Agosta, B. Fravel, and L. K. Montgomery, "Superconducting properties and Fermi-surface topology of the quasi-two-dimensional organic superconductor Λ -(BETS)₂GaCl₄," *J. Phys.: Condens. Matter*, **13**, 8325 (2001). <http://www.iop.org/EJ/abstract/0953-8984/13/36/308>

Avril Williams, Bert D. Alleyne, Hazel-Ann Hosein, Hema Jaggernauth, Lincoln A. Hall, Bruce M. Foxman, Laurence K. Thompson, and Charles Agosta, "First-row transition metal complexes of 3-phenyl-4-hydroxycyclobut-3-ene-1,2-dione (phenylsquarate)," *Inorganica Chimica Acta*, **313**, 56 (2001).

Z. Bayindir, C. Martin, I. Mihut, L. DeViveiros, T. Coffey, C. C. Agosta, and M. Tokumoto, "Radio frequency measurements of the superconducting transition in κ -(ET)₂Cu(NCS)₂ using a tunnel diode oscillator in pulsed magnetic fields," *Synth. Metals*, **120**, 723 (2001).

T. Coffey, Z. Bayindir, J. F. DeCarolis, M. Bennett, G. Esper and C. C. Agosta, "Measuring Radio Frequency Properties Of Materials In Pulsed Magnetic Fields With A Tunnel Diode Oscillator," *Rev. Sci. Instr.*, **71**, 4600 (2000).

S. A. Ivanov, C. C. Agosta, and T. Coffey B. W. Fravel, and L. K. Montgomery “Hydrostatic pressure studies of the new organic conductor α -(BETS)₂KHg(SCN)₄,” *Physical Phenomena in High Magnetic Fields III*, Eds., Z. Fisk, L. P. Gor’Kov, R. Schrieffer, World Scientific, 241 (1999).

C. C. Agosta, S. Ivanov, Z. Bayindir, T. Coffey, N. D. Kushch, E. B. Yagubskii, T. Burgin, and L. K. Montgomery, “The Anomalous Superconducting Phase Diagram of (BEDO-TTF)₂ReO₄ · H₂O,” *Synth. Metals*, **103**, 1795 (1999).

S. A. Ivanov, T. Coffey, C. C. Agosta, S. T. Hannahs, C. Immer, N. D. Kushch and E. B. Yagubskii, “Studies of the organic superconductor (BEDO)₂ReO₄H₂O at high pressures and high magnetic fields,” *Synth. Metals*, **85**, 1499 (1997).

L. K. Montgomery, B. W. Fravel, J. C. Huffman, C. C. Agosta and S. A. Ivanov, “Synthesis and preliminary characterization of new conducting salts derived from bis(ethylenedithio)tetraselenafulvalene (BETS),” *Synthetic Metals*, **84**, 1521 (1997).

S. A. Ivanov, C. H. Mielke, T. Coffey, D. A. Howe, and C. C. Agosta, “Electronic transport studies of the new organic metals κ -(BETS)₂NH₄Hg-(SCN)₄ and κ -(BETS)₂KHg(SCN)₄ in high magnetic fields,” *Phys. Rev. B*, **55**, 4191 (1997).

Fritz Herlach, Charles C. Agosta, Ria Bogaerts, Willy Boon, Igne Deckers, Alain Keyser, Neil Harrison, Alexander Lagutin, Liang Li, Lieven Trappeniers, Johan Vanacken, Luc Van Bockstal, Ann Van Esch, “Experimental techniques for pulsed magnetic fields,” *Physica B*, **216**, 161 (1996).

C. C. Agosta, C. H. Mielke, S. A. Ivanov, D. A. Howe, J. Goettee, M. Tokumoto, “Modulation of the breakdown orbits in an organic metal with both closed and open Fermi surfaces.” *Physical Phenomena in High Magnetic Fields II*, Eds., Z. Fisk, L. P. Gor’Kov, R. Schrieffer, World Scientific, 297 (1996).

X. Chen, J. S. Brooks, S. J. Klepper, G. J. Athas, S. Valfells, Y. Tanaka, N. Kinoshita, T. Kinoshita, M. Tokumoto, H. Anzai, and C. C. Agosta, “Pressure effects on the Electronic Structure and Low Temperature states in the α -(BEDT-TTF)₂MHg(SCN)₄ organic conductor family,” *Phys. Rev. B*, **52**, 14457 (1995).

C. C. Agosta, D. A. Howe, M. A. Antia, S. A. Ivanov, C. H. Mielke and F. Morgan, “A Study of the Rapid Oscillations of (TMTSF)₂ClO₄ in Different Regions of the H -T Phase Diagram,” *High Magnetic Fields in the Physics of Semiconductors*, Ed. D. Heiman, World Scientific, pp. 738 (1995).

C. C. Agosta, C. H. Mielke, S. A. Ivanov, D. A. Howe, F. M. Morgan, M. Tokumoto, N. Kinoshita and H. Anzai, “Fermiology and Field-Induced Phase Transitions of Low-Dimensional Organic Conductors in High Magnetic Fields,” *High Magnetic Fields in the Physics of Semiconductors*, Ed. D. Heiman, World Scientific, pp. 726 (1995).

C. C. Agosta, S. A. Ivanov, C. H. Mielke, D. A. Howe, M. Antia and F. M. Morgan, "New Structure in the Angular and Field Dependencies of the Magnetoresistance of (BEDT-TTF)₂TIHg(SCN)₄," *Solid State Commun.*, **92** 939 (1994).

M. Tamura, H. Kuroda, S. Uji, H. Aoki, M. Tokumoto, A. G. Swanson, J. S. Brooks, C. C. Agosta and S. T. Hannahs, "Analyses of de Haas-Van Alphen Oscillations and Band Structure of an Organic Superconductor θ -(BEDT-TTF)₂I₃," *J. Phys. Soc. Japan.*, **63**, 615 (1994).

S. Uji, H. Aoki, J. S. Brooks, A. S. Perel, G. J. Athas, S. J. Klepper, C. C. Agosta, D. A. Howe, M. Tokumoto, N. Kinoshita, Y. Tanaka, and H. Ansai, "Magnetic Breakdown in the Organic Conductor (BEDT-TTF)₂KHg(SCN)₄," *Solid State Commun.*, **88**, 683 (1993).

S. J. Klepper, J. S. Brooks, X. Chen, I. Bradaric, M. Tokumoto, N. Kinoshita, Y. Tanaka, C. C. Agosta, "Pressure-induced nesting in the low-dimensional organic superconductor α -(BEDT-TTF)₂NH₄Hg(SCN)₄," *Phys. Rev. B*, **48** 9913 (1993).

J. S. Brooks, S. J. Klepper, C. C. Agosta, M. Tokumoto, N. Kinoshita, Y. Tanaka, S. Uji, H. Aoki, A. S. Perel, G. J. Athas, X. Chen, D. A. Howe and H. Anzai, "Magneto-Oscillatory Behavior and Magnetism in Quasi-Two-Dimensional Organic Conductors," Proceedings of Yamada conference XXXIII, The Application of High Magnetic Fields in Semiconductor Physics, *Physica B*, **184**, 489 (1993).

M. Tokumoto, A. G. Swanson, J. S. Brooks, C. C. Agosta and S. T. Hannahs, N. Kinoshita, H. Anzai, M. Tamura, H. Tajima, H. Kuroda, A. Ugawa and K. Yakushi, "Magnetic quantum oscillations in low-dimensional organic conductors (BEDT-TTF)₂X," Proceedings of Yamada conference XXXIII, The Application of High Magnetic Fields in Semiconductor Physics, *Physica B*, **184**, 508 (1993).

J. S. Brooks, C. C. Agosta, M. Tokumoto, S. J. Klepper, A. S. Perel, G. Athas, D. A. Howe, "Novel Interplay of Fermi-Surface Behavior and Magnetism in a Low Dimensional Organic Conductor," *Phys. Rev. Lett.*, **69**, 156 (1992).

T. Q. Vu, V. Bindilatti, Y. Shapira, C. C. Agosta, E. J. McNiff, Jr., R. Kershaw, K. Dwight and A. Wold, "Distant-neighbor exchange constants from magnetization steps in Zn_{1-x}Co_xTe," *Phys Rev B.*, **46** , 11617 (1992).

V. Bindilatti, T. Q. Vu, Y. Shapira, C. C. Agosta, E. J. McNiff, Jr., R. Kershaw, K. Dwight and A. Wold, "Split magnetization steps in Cd_{1-x}Mn_xSe: Inequivalent nearest neighbors and the Dzyaloshinski-Moriya interaction," *Phys Rev. B*, **45** 5328 (1992).

M. Tokumoto, A. G. Swanson, J. S. Brooks, C. C. Agosta, S. T. Hannahs, N. Kinoshita, H. Anzai, J. R. Anderson, "Direct Observation of Spin-Splitting of the Shubnikov de Haas Oscillations in a Quasi-Two-Dimensional Organic Conductor (BEDT-TTF)₂KHg(SCN)₄," *J. Phys. Soc. Japan*, **59**, 2324 (1990).

Charles C. Agosta, S. Foner, J. S. Brooks, W. G. Clark, P. M. Chaikin, "Magneto-resistance of (TMTSF)₂ClO₄ In Pulsed Magnetic Fields," *Organic Superconductors*. Plenum Press, pp. 201 (1990).

M. Tokumoto, A. G. Swanson, J. S. Brooks, C. C. Agosta, S. T. Hannahs, N. Kinoshita, H. Anzai, M. Tamura, H. Tajima, H. Kuroda, J. R. Anderson, "Fermi Surface Study of Organic Superconductors (BEDT-TTF)₂X: A Wonderland of Two-Dimensional Molecular Metals," *Organic Superconductors*. Plenum Press, pp. 167 (1990).

Charles C. Agosta, Isaac F. Silvera, H.T.C. Stoof and B.J. Verhaar, "Trapping of Neutral Atoms with Resonant Microwave Radiation," *Phys. Rev. Lett.*, **62**, 2361 (1989).

Charles C. Agosta and Isaac F. Silvera, "Proposed Trapping of Atomic Hydrogen With Microwave Radiation," *Proceedings of the ISI conference on Spin Polarized Systems*, World Sci. Publ. Co. (1988).

Ronald L. Walsworth Jr., Isaac F. Silvera, H. P. Godfried, C. C. Agosta, Robert F. C. Vessot and E. M. Mattison, "A Hydrogen Maser at Subkelven Temperatures," *Phys Rev A*, **34**, 2550 (1986).

Charles C. Agosta, Suwen Wang, L. H. Cohen and H. Meyer, "Transport Properties of Helium near the Liquid-Vapor Critical Point. IV. The Shear Viscosity of ³He and ⁴He," *Journal of Low Temperature Physics*, **67**, 237 (1987).
<https://commerce.metapress.com/content/j773k4p11x373217>

R. P. Behringer, J. N. Shaumeyer, C. A. Clark, and C. C. Agosta, "Turbulent Onset in Moderately Large Convecting Layers," *Phys Rev A*, **A26**, 3723 (1982).

R. P. Behringer, C. Agosta, J.S. Jan, and J. N. Shaumeyer, "Time-Dependent Rayleigh-Benard Convection and Instrumental Attenuation," *Physics Letters*, **80A**, 273 (1980).

Presentations at Professional Meetings

Laurel E. Winter, William A. Coniglio, Kyuil Cho, Braunen E. Smith, C.C. Agosta, L.K. Montgomery "Upper Critical Field and Phase Diagram Studies for λ -(BETS)₂GaCl₄" Bull. Am. Phys. Soc. **54**, (2009) <http://meetings.aps.org/link/BAPS.2009.MAR.V33.14>

William A. Coniglio, Laurel E. Winter, Kyuil Cho, Braunen E. Smith, C.C. Agosta, L.K. Montgomery, "New details in the phase diagram of λ -(BETS)₂GaCl₄ made by advancing the art of RF penetration depth measurements in pulsed fields using a tunnel diode oscillator" Bull. Am. Phys. Soc. **54**, (2009), <http://meetings.aps.org/link/BAPS.2009.MAR.V33.13>

Kyuil Cho, Braunen E. Smith, William A. Coniglio, Laurel Winter, Charles C. Agosta, John A. Schlueter "Upper Critical Field and SdH Quantum Oscillation Studies in Organic Superconductor β -(BEDT-TTF)₂SF₅CH₂CF₂SO₃" Bull. Am. Phys. Soc. **53**, (2008), <http://meetings.aps.org/link/BAPS.2008.MAR.X11.8>

Braunen E. Smith, Kyuil Cho, William A. Coniglio, Charles C. Agosta, "Determination of the Pauli Paramagnetic Limit in Quasi 2D Superconductors," Bull. Am. Phys. Soc. **53**, (2008), <http://meetings.aps.org/link/BAPS.2008.MAR.X11.10>.

Braunen Smith, Kyuil Cho, S. Tozer, T. Murphy, E. Palm and Charles Agosta, "Critical fields, vortex melting and the irreversibility line in quasi 2D organic superconductors," Bull. Am. Phys. Soc. **51**, (2006).

Kyuil Cho, Braunen Smith, Chris Rea, Mike Viotti, Charles Agosta, John Schlueter, "Pauli limiting in the superconductor κ -(BEDT-TTF)₂Cu(NCS)₂ under pressure," Bull. Am. Phys. Soc. **51**, (2006).

C. C. Agosta, Kyuil Cho, C. Martin, I. Mihut, , "Evolution of a First Order Superconducting Critical Field Transition in κ -(BEDT-TTF)₂Cu(NCS)₂," ISCOM Key West USA, (2005).

Charles C. Agosta , C. Martin , I. Mihut , C. Gatete , S.W. Tozer , H.A. Radovan , E.C. Palm , T.P. Murphy, "Measuring the London Penetration Depth in Aniso\tropic Superconductors," Bull. Am. Phys. Soc. **50**, (2005).

Charles C. Agosta, "Penetration Depth Measurements Using a Tunnel Diode Oscillator in Extreme Conditions." Invited Talk, Bull. Am. Phys. Soc. **49**, (2004).

Catalin Martin, Charles C. Agosta, Stan W. Tozer, Henri A. Radovan, Eric C. Palm, Timothy P. Murphy, J.L. Sarrao , M. Kurmoo, "Contactless rf measurements of the critical field and," Bull. Am. Phys. Soc. **49**, (2004).

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Izabela Mihut, Charles Agosta, Charles Mielke, and M. Tokumoto, "Angular Study of the Magnetic Breakdown Effect in the Organic Conductor κ -(BEDT-TTF)₂Cu(NCS)₂ at High Magnetic Field," Bull. Am. Phys. Soc. **47**, 140 (2002).

T. Coffey, C. Martin, H. Gao, C. C. Agosta, H. Anzai, and M. Tokumoto, "Anisotropic Critical Field Study of α -(ET)₂NH₄Hg(SCN)₄," Bull. Am. Phys. Soc. **47**, 327 (2002).

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- Z. Bayindir, C. Martin, I. Mihut, T. Coffey, C. C. Agosta, M. Tokumoto, and H. Anzai, "The study of the superconducting phase diagram of organic superconductor (BEDT-TTF)₂Cu(NCS)₂ in short pulsed magnetic fields," Bull. Am. Phys. Soc. **46**, 342 (2001).
- T. Coffey, H. Gao, C. C. Agosta, H. Anzai, and M. Tokumoto, "Anisotropic Critical Field Study of α -(ET)₂NH₄Hg(SCN)₄ Using rf Penetration," Bull. Am. Phys. Soc., **46**, 342 (2001).
- Z. Bayindir, T. Coffey, J. DeCarolis, I. Mihut, C. C. Agosta, and L. K. Montgomery, "Measurements of the Superconducting Phase Diagram of λ -(BETS)₂GaCl₄ in Short Pulsed Magnetic Fields," Bull. Am. Phys. Soc., **45**, 282 (2000).
- T. Coffey, Z. Bayindir, L. De Viveiros, H. Gao, C. C. Agosta, M. Tokumoto, and H. Anzai, "Anisotropic Critical Field Study of α -(ET)₂NH₄Hg(SCN)₄ Using rf Penetration," Bull. Am. Phys. Soc., **45**, 281 (2000).
- T. Coffey, J.F. DeCarolis, G. Esper, Z. Bayindir, C.C. Agosta, "Using a tunnel diode oscillator in pulsed magnetic fields to study an organic superconductor," Bull. Am. Phys. Soc., **44**, 1591 (1999).
- Z. Bayindir, T. Coffey, G. Esper, J.F. DeCarolis, C.C. Agosta, T. Burgin, L.K. Montgomery, E. Yagubskii, N. Kushch, "The Anomalous Superconducting Phase Diagrams of the Organic Superconductors: λ -(BETS)₂GaCl₄ and (BEDO-TTF)ReO₄H₂O," Bull. Am. Phys. Soc., **44**, 1591 (1999).
- C. C. Agosta, T. Coffey, Z. Bayindir, G. Esper, T. Roy, E. Yagubskii, N. Kushch, "Anomalous Superconducting Phase Diagram of (BEDO-TTF)₂ReO₄H₂O," Bull. Am. Phys. Soc., **43**, 16 (1998).
- C. H. Mielke, C. C. Agosta, S. A. Ivanov, D. A. Howe, M. Bennet and L. K. Montgomery, "Pinning Potentials, Vortex Dynamics, and Fluctuations in a Layered Molecular Superconductor," Bull. Am. Phys. Soc., **41**, 16 (1996).
- D. A. Howe, C. C. Agosta, C. H. Mielke, S. A. Ivanov and T. J. Coffey, "A Study of the Rapid Magnetic Oscillations in (TMTSF)₂ClO₄," Bull. Am. Phys. Soc., **41**, 73 (1996).
- C. H. Mielke, C. C. Agosta, D. A. Howe, S. A. Ivanov, T. Coffey, V. N. Laukhin and N. D. Kushch, "Anisotropy of a Molecular Metal to 50 Tesla," Bull. Am. Phys. Soc., **41**, 118 (1996).
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Conferences Attended.

(Talks were given at each of these conferences. If the talk resulted in a paper it is listed under publications, if not, it is listed under presentations.)

American Physical Society, March, 2009.

American Physical Society, March, 2008.

American Physical Society, March, 2007.

International Symposium on Crystalline Organic Metals, Superconductors and Magnets, Valencia, Spain, September, 2007.

American Physical Society, March, 2006.

American Physical Society, March, 2005.

International Symposium on Crystalline Organic Metals, Superconductors and Magnets, Key West, USA, September, 2005.

American Physical Society, March, 2005.

Spectroscopies in Novel Superconductors, Sitges, Spain, 2004.

American Physical Society, March, 2004. Invited talk.

International Symposium on Crystalline Organic Metals, Superconductors and Magnets, Port Bourgeney France, September, 2003.

American Physical Society, March, 2003.

American Physical Society, March, 2002.

American Physical Society, March, 2001.

Physical Phenomena at High Magnetic Fields – IV, Santa Fe, USA, October, 2001.

International Conference on Synthetic Metals, Austria, July, 2000.

American Physical Society, March, 2000.

American Physical Society, March, 1999.

Physical Phenomena at High Magnetic Fields – III, Tallahassee, USA, October, 1998.

International Conference on Synthetic Metals, Montpellier, France, July, 1998.

American Physical Society, March, 1998.