



Newsletter

June 2003

The College of Physical and Mathematical Sciences

In the Month of June...

Tuesday, June 3 –
Devotional: Elder William R. Bradford, of the First Quorum of the Seventy of The Church of Jesus Christ of Latter-day Saints

Tuesday, June 10 –
Devotional: Robert Marshall, Visual Arts

Monday, June 16 – Last Day of Class, Spring Term

Tuesday, June 17 – No Devotional, Reading Day

Monday, June 23 – First Day of Class, Summer Term

Tuesday, June 24 – Devotional: Joan W. Young, Marriott School

In This Issue...

In the Month of June	1
Physics News	1
Mathematics Conference	1
Devotional Address	1
College Publications	2

College News

Department of Physics and Astronomy News

Academic Vice President Alan L. Wilkins recently announced the appointment of R. Steven Turley, chair of the Department of Physics and Astronomy, as Associate Dean, Freshman Year in the Office of Undergraduate Education. Dr. Turley's appointment will become effective as soon as a new department chair has been appointed. We anticipate that a new chair will be appointed in the next few weeks. We offer our congratulations to Dr. Turley on his new assignment.

Department of Mathematics Conference

The Department of Mathematics is hosting The Wasatch Topology Conference, June 9-11, and The 20th Annual Workshop in Geometric Topology, June 12-14, in Park City, Utah. The conference and workshop will include speakers from Universities around the country. The topology conference will be concluded with a special banquet in honor of Dr. James W. Cannon on the occasion of his 60th birthday.

Dennis Tolley Delivers Devotional Address

H. Dennis Tolley, of the Department of Statistics, delivered a powerful and well-received devotional address on May 13, 2003. His thought-provoking presentation was titled "Doing Business in Babylon." The positive feedback received by Dr. Tolley from viewers far removed from campus underscores the wide distribution and positive impact of campus devotional addresses.

Our purpose is to produce students who have that rare and precious combination of a superb secular education, complemented by faith in the Lord, a knowledge of the doctrines He has revealed, and a testimony that they are true.

Boyd K. Packer, "To Be Learned Is Good If ...," Ensign, Nov. 1992, 71

College Publications

Department of Chemistry & Biochemistry

N.K. Dalley, X. Kou, R.A. Bartsch, and P. Kus, "Synthesis of New Cyclophane Host Molecules and Crystal Structures of Their Compounds with Hydrocarbon Guests," *J. Incl. Phenom. Macrocyclic Chemistry* **45**, 39-148 (2003)

A. Trokhymchuk, D. Henderson, A. Nikolov, and D.T. Wasan, "Computer Modeling of Ionic Micelle Structuring in Liquid Films," *J Phys Chem* **B107**, 3927-3937 (2003)

D. Wasan, A. Nikolov, and D. Henderson, "New Vistas in Dispersion Science and Engineering," *Amer. Inst. Chem. Eng. J.* **49**, 550-556 (2003)

T.A. van der Straaten, G. Kathawall, Z. Kuang, D. Boda, D.P Chen, U. Ravaioli, R.S. Eisenberg, and D. Henderson, "Equilibrium Structure of Electrolyte Calculated Using Equilibrium Molecular Dynamics, and Boltzmann Transport Monte Carlo Simulations," *Proceed. Inter. Conf. Computational Nanoscience* February, 2003, 447-451.

D. Ellingson, A. Olson, S. Matheson, R.S. Criddle, B.N. Smith, and L.D. Hansen, "Determination of the Enthalpy Change for Anabolism by Four Methods," *Thermochimica Acta* **400**, 79-85 (2003)

R.S. Criddle, J.N. Church, B.N. Smith, and L.D. Hansen, "Fundamental Causes of the Global Patterns of Species Range and Richness," *Russian J. Plant Phys.* **50**(2), 215-223 (2003)

V.W. McCarlie, L.D. Hansen, B.N. Smith, S.B. Monsen, and D.J. Ellingson, "Anabolic Rates Measured by Calorespirometry for Eleven Subpopulation of *Bromus tectorum* Match Temperature Profiles of Local Microclimates," *Russian J. Plant Phys.* **50**(2), 205-214 (2003)

G. Xue, J.S. Bradshaw, N.K. Dalley, P.B. Savage, and R.M. Izatt, "Synthesis of *trans*-Disubstituted Cyclam Ligands Appended with Two 6-Hydroxymethylpyridin-2-ylmethyl Sidearms: Crystal Structures of the 1,8-Dimethyl-4,11-di(6-hydroxymethylpyridin-2-ylmethyl)cyclam Ligan and Its Co(II) and Ni(II) Complexes," *J. Heterocyclic Chem.* **40**, 383-387 (2003)

M.S. Esplin, M.B. Fausett, D.S. Faux, and S.W. Graves, "Changes in the Isoforms of the Sodium Pump in the Placenta and Myometrium of Women in Labor," *Am. J. Obstet. Gynecol.* **188**(3), 759-764 (2003)

H.-C. Song, J.S. Bradshaw, Y.-W. Chen, G.-P. Xue, W.-M. Li, K.E. Krakowiak, P.B. Savage, Z.-L. Xu, and R.M. Izatt, "Synthesis of New Crown Ethers Containing Appended Pyridine, 10-

Hydroxybenzoquinoline, 8-Hydroxyquinoline and 2-Amino-1-hydroxybiphenyl Sidearms," *Supramol. Chem.* **14**, 263-269 (2002)

Y.-J. Liang, J.S. Bradshaw, and D.V. Dearden, "The Thermodynamic Basis for Enantiodiscrimination- Gas-Phase Measurement of the Enthalpy and Entropy of Chiral Amine Recognition by Dimethyldiketopyridino-18-crown-6," *J. Phys. Chem. A.* **106**, 9665-9671 (2002)

J. Kawakami, R.T. Bronson, G.-P. Xue, J.S. Bradshaw, R.M. Izatt, and P.B. Savage, "Characterization of Bis-8-hydroxyquinoline-armed Diazatrithia-16-crown-5 and Diazadibenzo-18-crown-6 Ligands as Fluorescent Chemosensors for Zinc," *J. Supramol. Chem.* **1**, 221-227 (2003)

Department of Computer Science

David K. Vawdrey, Eric S. Hall, Charles D. Knutson, "A Self-Adapting Healthcare Information Infrastructure Using Mobile Computing Devices." *Proceedings of the 5th IEEE International Workshop on Enterprise Networking and Computing in Healthcare Industry (HealthCom 2003)*, Santa Monica, California, June 6-7, 2003.

Department of Mathematics Education

B. Speiser, C. Walter and Carolyn Maher, "Representing motion: an experiment in learning," *Journal of Mathematical Behavior* **22**, 1-35 (2003)

Department of Physics & Astronomy

C. Capillas, E. Lroumova, M. I. Aroyo, J. M. Perez-Mato, H. T. Stokes, D. M. Hatch, "SYMMODES: a software package for group-theoretical analysis of structural phase transitions," *J. Appl. Cryst.* **36**, 953 (2003)

D. M. Hatch and H. T. Stokes, "INVARIANTS: Program for Obtaining a List of Invariant Polynomials of the Order Parameter Components Associated with Irreducible Representations of a Space Group." *J. Appl. Cryst.* **36**, 951 (2003)

J.P. Ye, G.X. Hu, S.Q. An, X.X. Dai, J.X. Dai, and W.E. Evenson, "The spatial and momentum distribution of Bose-Einstein condensation in harmonic traps," *Physica A*, **323**, 357-369 (2003)

Department of Statistics

J.D. Beckstead, A.L. Hatch, M.J. Lambert, D.L. Eggett, M.K. Goates, D.A. Vermeersch, "Clinical Significance of the Outcome of Questionnaire (OQ-45.2)," *The Behavior Analyst Today*, **4**(1), 79-90 (2003)