

THE

Journal

OF THE AMERICAN
LEATHER CHEMISTS ASSOCIATION



105th Annual Convention

to be held at the
Oglebay Resort
Wheeling, WV
June 18-21, 2009

For more information go to
www.leatherchemists.org

ISSN: 0002-9726

December 2008

Vol. CIII, No. 12

JALCA 103(12) 401-437, 2008

CONTENTS

Novel Approach towards High Exhaust Chromium Tanning – Part I: Role of Enzymes in the Tanning Process	401
<i>by R. VENBA, S. KANTH AND N. CHANDRABABU</i>	
Evaluation of the Energy Savings when using Vacuum Dryers with Total Thermal Energy Recovery in Tanneries	412
<i>by J. MORERA, E. BARTOLI, L. CABEZA AND M. MEDRANO</i>	
Synthesis of Hyper-branched Polymer with Terminal Amidogen and its Application as Formaldehyde Scavenger in Leather	416
<i>by X. WANG, L. REN, AND T. QIANG</i>	
Consequence of UV Irradiation on the Zirconium Tanned Collagen: A Molecular Level Study	422
<i>by N. NISHAD, C. PRAGADHISH, B. PURUSHOTHAMAN, J. RAO AND B. NAIR</i>	
Lifelines	428
Call for Papers for the 105th Annual Convention	429
Author Index to Volume 103	430

COMMUNICATIONS FOR JOURNAL PUBLICATION

Manuscripts, Technical Notes and Trade News Releases should contact

MR. ROBERT F. WHITE, *Journal Editor*, 1314 50th Street, Suite 103, Lubbock, TX 79412, USA.

E-mail: jalcaeditor@prodigy.net

Mobile phone: (616) 540-2469

Contributors should consult the Journal Publication Policy at
http://www.leatherchemists.org/journal_publication_policy.asp

JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOCIATION

*Proceedings, Reports, Notices, and News
of the*
AMERICAN LEATHER CHEMISTS ASSOCIATION

OFFICERS

STEPHEN S. YANEK, *President*
Tasman Hartford, LLC / WB Place
368 West Sumner Street
Hartford, WI 53027

DAVID LEBLANC, *Vice-President*
TFL USA/Canada, Inc
8301 New Trails Drive
The Woodlands, TX 77381-4248

CRAIG G. KEYSER, *Vice-President Elect*
19 Lake Drive
North Brunswick, NJ 08902

COUNCIL

Harold Diephouse
GST Auto Leather, Inc.
20 Oak Hollow Road, Suite 300
Southfield, MI 48334

Robert J. Harvey
Hermann Oak Leather Co.
4050 N. First Street
St. Louis, MO 63147-3493

Steve Lange
Seton Company
Horton Drive
Saxton, PA 16678

Jeffery D. Miller
GST Auto Leather, Inc
31601 Industrial Rd.
Livonia, MI 48150

Gary Rennefeldt
Tyson Foods, Inc.
800 Stevens Port Drive
Dakota Dunes, SD 57049

George Stockman
Buckman Laboratories, Inc.
12567 N. McLean Blvd.
Memphis, TN 38108-3513

EDITORIAL BOARD

Dr. David G. Bailey
Bailey Consulting

Chris Black
Prime Tanning Corporation

Dr. Kenneth A. Boni
Retired

Dr. Eleanor M. Brown
Eastern Regional Research Center
U.S. Department of Agriculture

Dr. Robert L. Dudley
Eastern Regional Research Center
U.S. Department of Agriculture

Dr. Paul L. Kronick
Retired

Dr. Graham Lampard
Leather, UK

Dr. Cheng-Kung Liu
Eastern Regional Research Center
U.S. Department of Agriculture

Dr. Edwin H. Nungesser
Rohm and Haas Company

David N. Price
Consultant

Dr. Dennis C. Shelly
Leather Research Institute

George Stockman
Buckman Laboratories, Inc.

Brandon Yoemans
S. B. Foot Tanning Co.

PAST PRESIDENTS

G. A. KERR, W. H. TEAS, H. C. REED, J. H. YOCUM, F. H. SMALL, H. T. WILSON, J. H. RUSSELL, F. P. VEITCH, W. K. ALSOP, L. E. LEVI, C. R. OBERFELL, R. W. GRIFFITH, C. C. SMOOT, III, J. S. ROGERS, LLOYD BALDERSON, J. A. WILSON, R. W. FREY, G. D. McLAUGHLIN, FRED O'FLAHERTY, A. C. ORTHMANN, H. B. MERRILL, V. J. MLEJNEK, J. H. HIGHBERGER, DEAN WILLIAMS, T. F. OBERLANDER, A. H. WINHEIM, R. M. KOPPENHOFER, H. G. TURLEY, E. S. FLINN, E. B. THORSTENSEN, M. MAESER, R. G. HENRICH, R. STUBBINGS, D. MEO, Jr., R. M. LOLLAR, B. A. GROTA, M. H. BATTLES, J. NAGHSKI, T. C. THORSTENSEN, J. J. TANCOUS, W. E. DOOLEY, J. M. CONSTANTIN, L. K. BARBER, J. J. TANCOUS, W. C. PRENTISS, S. H. FEAIRHELLER, M. SIEGLER, F. H. RUTLAND, D.G. BAILEY, R. A. LAUNDER, B. D. MILLER, G. W. HANSON, D. G. MORRISON, R. F. WHITE, E. L. HURLOW, M. M. TAYLOR, J. F. LEVY, D. T. DIDATO, R. HAMMOND, D. G. MORRISON, W. N. MULLINIX, D. C. SHELLY, W. N. MARMER

THE JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOCIATION (USPS #019-334) is published monthly by The American Leather Chemists Association, 1314 50th Street, Suite 103, Lubbock, Texas 79412. Telephone (806)744-1798 Fax (806)744-1785. Single copy price: \$8.50 members, \$17.00 non-member. Subscriptions: \$150.00 plus postage and handling of \$40 for domestic subscribers and \$50 for foreign subscribers.

Periodical Postage paid at Lubbock, Texas and additional mailing offices. Postmaster send change of addresses to The American Leather Chemists Association, 1314 50th Street, Suite 103, Lubbock, Texas 79412.

Website: www.leatherchemists.org E-mail: ALCA@leatherchemists.org

COPYRIGHT 2008. THE AMERICAN LEATHER CHEMISTS ASSOCIATION