

THE

# Journal

OF THE AMERICAN  
LEATHER CHEMISTS ASSOCIATION



Join our  
Online Leather  
Discussion  
Forum at

[www.leatherchemists.org/  
networking.asp](http://www.leatherchemists.org/networking.asp)

ISSN: 0002-9726

July 2012

Vol. CVII, No. 7

JALCA 107(7), 220-256, 2012

## CONTENTS

<b>Characterization of Commercially Available Leathers using Thermogravimetric Analysis and Py/GC-MS System .....</b>	<b>220</b>
<i>by A. MARCILLA, A. GARCÍA, M. LEÓN, E. BAÑÓN, AND P. MARTÍNEZ</i>	
<b>Preparation of a New Itaconate Based Amphoteric Surfactant for Fatliquor Applications .....</b>	<b>231</b>
<i>by R. JANARDHANAN, V. VIJAYABASKAR, AND B. S. R. REDDY</i>	
<b>Method to Extract Water-soluble Collagen from Induced Biphasic Commercial Gel.....</b>	<b>243</b>
<i>by M. MASTAUSKAS, AND G. MAFFIA</i>	
<b>Preparation, Characterization and Application of Silica Metal Oxide Nanoparticles for Leather Coating.....</b>	<b>249</b>
<i>by S. SUDHAHAR, C. SIVARAJ, AND S. GUPTA</i>	
<b>Lifelines .....</b>	<b>256</b>

## 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](mailto:jalcaeditor@prodigy.net)

Mobile phone: (616) 540-2469

Contributors should consult the Journal Publication Policy at  
[http://www.leatherchemists.org/journal\\_publication\\_policy.asp](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

STEVEN GILBERG, *President*  
Tanmach Limited  
780 Hardwick Road, PO Box 546  
Bolton, Ontario L7E 5T4  
Canada

STEVE LANGE, *Vice-President*  
GST AutoLeather, Inc.  
31601 Industrial Road  
Livonia, MI 48150  
SARAH DRAYNA, *Vice-President Elect*

LANXESS Corporation  
4895 S. Courtland Pkwy.  
New Berlin, WI 53151

## COUNCIL

Goetz Hagen  
Tannin Corporation  
4331 Chesapeake Dr.  
Charlotte, NC 28216

Andy Porter  
Prime Leather Finishes Co.  
1002 Hickory Street  
Pewaukee, WI 53072

John Rodden  
Union Specialties, Inc.  
3 Malcolm Hoyt Drive  
Newburyport, MA 01950

Cheng-Kung Liu  
USDA-ERRC  
600 E. Mermaid Lane  
Wyndmoor, PA 19038

Andreas W. Rhein  
S. B. Foot Tanning Co.  
805 Bench Street  
Red Wing, MN 55066

Susan Steele  
Buckman USA  
1256 N. McLean Blvd.  
Memphis, TN 38108

## EDITORIAL BOARD

Chris Black  
Consultant

Dr. Robert L. Dudley  
Retired

Dr. Edwin H. Nungesser  
Dow Chemical Company

Dr. Kenneth A. Boni  
Retired

Dr. Anton Ela'mma  
Retired

Dr. Mila Aldema Ramos  
Eastern Regional Research Center  
U.S. Department of Agriculture

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

Prasad V. Inaganti  
Wickett and Craig of America

George Stockman  
Buckman Laboratories, Inc.

Dr. Nick Cory  
Leather Research Laboratory  
University of Cincinnati

Dr. Graham Lampard  
*Leather, UK*

Brandon Yoemans  
S. B. Foot Tanning Co.

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

## 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. KOPPENHOEFER, 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. HURLLOW, M. M. TAYLOR, J. F. LEVY, D. T. DIDATO, R. HAMMOND, D. G. MORRISON, W. N. MULLINIX, D. C. SHELLY, W. N. MARMER, S. S. YANEK, D. LeBLANC, C.G. KEYSER, A.W. RHEIN

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: \$175 for hard copy plus postage and handling of \$60 for domestic subscribers and \$70 for foreign subscribers; \$175 for ezine only; and \$195 for hard copy and ezine plus postage and handling of \$60 for domestic subscribers and \$70 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](http://www.leatherchemists.org) E-mail: [ALCA@leatherchemists.org](mailto:ALCA@leatherchemists.org)

COPYRIGHT 2012. THE AMERICAN LEATHER CHEMISTS ASSOCIATION