

THE

Journal

OF THE AMERICAN
LEATHER CHEMISTS ASSOCIATION

July 2021

Vol. CXVI, No.7

JALCA 116(7), 225-264, 2021



116th Annual Convention

to be held at the
Eaglewood Resort & Spa
1401 Nordic Road
Itasca, IL 60143

DATE CHANGE:
June 21-24, 2022

For more information go to:
[leatherchemists.org/
annual_convention.asp](http://leatherchemists.org/annual_convention.asp)

Contents

Studies on the Development of Benzoyl Peroxide Catalysed Rapid Oil Tanning using Linseed Oil by Bindia Sahu, Jaya Prakash Alla and Gladstone Christopher Jayakumar	227
A Comprehensive Understanding on Sewability of Natural Biomaterial: An Insight on Process Optimization during Leather Manufacture by GC Jayakumar, K. Phebe Aaron and K Krishnaraj	233
Hydrogen Peroxide-oxidized Soybean Polysaccharides as Novel Masking Agents for Zirconium Tanning by Haolin Zhu, Fang Wang, Keyong Tang, Jie Liu, Xuejing Zheng and Shufa Qin	239
Preparation and Properties of Thermally Expandable Microspheres for Leather Foam Coating by Guodong Huang, Zhixian Lin, Haojun Fan, Jun Xiang, Chong Zheng and Zhiqing Luo	249
Lifelines	260
Obituary: Leo Devarenne	264
Corrigendum	260

Distributed by



An imprint of the University of Cincinnati Press

ISSN: 0002-9726

Communications for Journal Publication

Manuscripts, Technical Notes and Trade News Releases should contact:
MR. STEVEN D. LANGE, Journal Editor, 1314 50th Street, Suite 103, Lubbock, TX 79412, USA
E-mail: jalcaeditor@gmail.com Mobile phone: (814) 414-5689

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

Beamhouse efficiency takes perfect balance.

Making leather on time, on spec and within budget requires a careful balance of chemistry and process. Buckman enables tanneries to master that balance with our comprehensive Beamhouse & Tanyard Systems. They include advanced chemistries that not only protect the hide but also maximize the effectiveness of each process, level out the differences in raw materials and reduce variations in batch processing. The result is cleaner, flatter pelts. More uniform characteristics. And improved area yield.

In addition, we offer unsurpassed expertise and technical support to help solve processing problems and reduce environmental impact with chemistries that penetrate faster, save processing time, improve effluent and enhance safety.

With Buckman Beamhouse & Tanyard Systems, tanneries can get more consistent quality and more consistent savings. Maintain the perfect balance. Connect with a Buckman representative or visit us at Buckman.com.

1945
2020 **Buckman75**

JOURNAL OF THE AMERICAN LEATHER CHEMISTS ASSOCIATION

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

OFFICERS

MIKE BLEY, *President*
Eagle Ottawa – Lear
2930 Auburn Road
Rochester Hills, MI 48309

JOSEPH HOEFLER, *Vice-President*
The Dow Chemical Company
400 Arcola Rd.
Collegeville, PA 19426

COUNCILORS

Shawn Brown
Quaker Color
201 S. Hellertown Ave.
Quakertown, PA 18951

Steve Lange
Leather Research Laboratory
University of Cincinnati
5997 Center Hill Ave., Bldg. C
Cincinnati, OH 45224

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

Jose Luis Gallegos
Elementis LTP
546 S. Water St.
Milwaukee, WI 53204

LeRoy Lehman
LANXESS Corporation
9501 Tallwood Dr.
Indian Trail, NC 28079

Marcelo Fraga de Sousa
Buckman North America
1256 N. McLean Blvd.
Memphis, TN 38108

EDITORIAL BOARD

Dr. Meral Birbir
Biology Department
Faculty of Arts and Sciences
Marmara University
Istanbul, Turkey

Chris Black
Consultant
St. Joseph, Missouri

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

Kadir Donmez
Leather Research Laboratory
University of Cincinnati
Cincinnati, Ohio

Dr. Anton Ela'mma
Retired
Perkiomenville, Pennsylvania

Cietta Fambrough
Leather Research Laboratory
University of Cincinnati
Cincinnati, Ohio

Mainul Haque
ALCA Education
Committee Chairman
Rochester Hills, Michigan

Joseph Hoefler
Dow Chemical Company
Collegeville, Pennsylvania

Elton Hurlow
Buckman International
Memphis, Tennessee

Prasad V. Inaganti
Wickett and Craig of America
Curwensville, Pennsylvania

Dr. Tariq M. Khan
Research Fellow, Machine Learning
Faculty of Sci Eng & Built Env
School of Info Technology
Geelong Waurm Ponds Campus
Victoria, Australia

Nick Latona
Eastern Regional Research Center
U.S. Department of Agriculture
Wyndmoor, Pennsylvania

Dr. Xue-pin Liao
National Engineering Centre for Clean
Technology of Leather Manufacture
Sichuan University
Chengdu, China

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

Dr. Rafea Naffa
New Zealand Leather & Shoe
Research Association Inc. (LASRA*)
Palmerston North, New Zealand

Edwin Nungesser
Dow Chemical Company
Collegeville, Pennsylvania

Dr. Benson Ongarora
Department of Chemistry
Dedan Kimathi University of Technology
Nyeri, Kenya

Lucas Paddock
Chemtan Company, Inc.
Exeter, New Hampshire

Dr. J. Raghava Rao
Central Leather
Research Institute
Chennai, India

Andreas W. Rhein
Tyson Foods, Inc.
Dakota Dunes, South Dakota

Dr. Majher Sarker
Eastern Regional
Research Center
U.S. Department of Agriculture
Wyndmoor, Pennsylvania

Dr. Bi Shi
National Engineering Laboratory
Sichuan University
Chengdu, China

Dr. Palanisamy Thanikaivelan
Central Leather
Research Institute
Chennai, India

Dr. Xiang Zhang
Genomics, Epigenomics and
Sequencing Core
University of Cincinnati
Cincinnati, Ohio

Dr. Luis A. Zugno
Buckman International
Memphis, Tennessee

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. TANCOS, W. E. DOOLEY, J. M. CONSTANTIN, L. K. BARBER, J. J. TANCOS, W. C. PRENTISS, S. H. FAIRHELLER, 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, S. S. YANEK, D. LEBLANC, C.G. KEYSER, A.W. RHEIN, S. GILBERG, S. LANGE, S. DRAYNA, D. PETERS

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: \$185 for hard copy plus postage and handling of \$60 for domestic subscribers and \$70 for foreign subscribers; \$185 for ezine only; and \$205 for hard copy and ezine plus postage and handling of \$60 for domestic subscribers and \$70 for foreign subscribers.

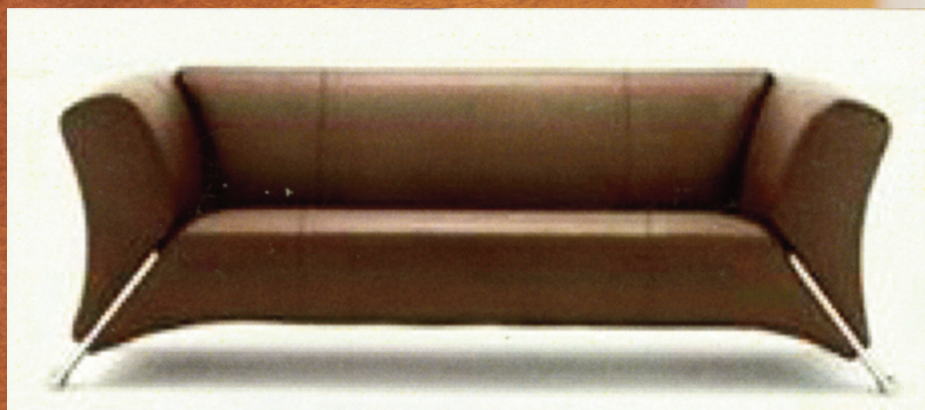
Periodical Postage paid at Lubbock, Texas and additional mailing offices. Postmaster send change of addresses to The American Leather Chemists Association, 1314 50th Street, Suite 103, Lubbock, Texas 79412.

LEATHER

AVELLISYNCO



Selected Dyestuffs



 **CHEMTAN**

17 Noble Farm Drive • Lee, NH 03861 (Office)
57 Hampton Road • Exeter, NH 03833 (Manufacturing)
Tel: (603) 772-3741 • Fax: (603) 772-0796
www.CHEMTAN.com

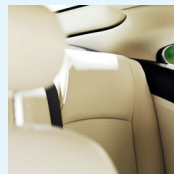


Stahl's innovations driven by sustainability

With the rise of both electric and self-driving, cars are becoming quieter and anti-squeak and rattle materials are becoming increasingly important. At the same time, improved anti-stain performance is required, because of the current trend for pale-colored car seats. Therefore, we have developed Stay Clean. This low-VOC coating technology protects pale-colored leather and vinyl surfaces against common stains, such as dye from jeans, spilled coffee and dirt. Our solution also makes surfaces low-squeak, which is a great asset as global research has shown that a squeaking car interior is one of the biggest annoyances among car owners. Another trend in car interior is the popularity of matt surfaces. Therefore, we have developed PolyMatte®. This non-squeaking solution provides a luxurious feel to the finished article in combination with flexibility and scratch and abrasion resistance. Our portfolio contains many products, varying from beamhouse products, tanning systems to finishes,

duller concentrates, crosslinkers and thickeners to leveling agents, defoamers, colorants and hand modifiers. Our most sustainable option is Green PolyMatte®, which is based on rapeseed oil (20%) instead of crude oil-derived intermediates. If you would like to know what our Stahl solutions for automotive can do for your business, please visit www.stahl.com or contact us at: alexander.campbell@us.stahl.com.

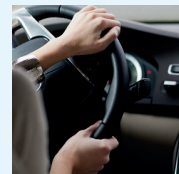
If it can be imagined, it can be created



Stay Clean



Low-VOC



PolyMatte®

Celebrating
75 Years
1941-2016

UNION
Specialties, Inc.

**The power of water-based
polyurethane technology**

3 Malcolm Hoyt Dr. Newburyport, MA 01950, USA. Certified ISO 9001:2015
Tel: +1 978-465-1717 Fax: +1 978 465-4194 E-mail: union@unionspecialtiesinc.com
www.unionspecialtiesinc.com



C O L D M i l l i n g



Smooth Leather Milling



Obituary

Leo Devarenne, age 84, of Rockford, Michigan, peacefully passed into eternity while at home surrounded by his family on June 6, 2021. He stoically outlived the prognosis of esophageal cancer in these last few years. Leo was born on August 4, 1936, the youngest of six siblings, in Danvers, Massachusetts. Leo is lovingly remembered by Sue, his wife of 58 years,



and his family Brian and Sandy Devarenne, Mike and Kathleen Devarenne, Tim Devarenne, and grandchildren Catherine, Emma, Sophie and Anna. After graduating from Danvers High School in 1953, Leo studied leather chemistry at Lowell Technological Institute. He went on to work in the leather industry his entire career. His first job out of college was in New York City in chemical sales for the leather industry. That job later took him to Chicago, where on a Young Catholics outing at Buckingham Fountain, he met Sue Miller, who would become his wife. They married in 1962, and after their honeymoon at Niagara Falls, continued on to their first home in Massachusetts. Leo's next job brought him to Wolverine World Wide, the maker of Hush Puppies shoes, in Rockford, Michigan. Leo was a dedicated Wolverine employee for 35 years. He started as a leather chemist, and then technical director. Later, he enjoyed traveling the world as a consultant in countries such as Brazil, Russia, and China. His business travel introduced him to adventurous food and drink which he enjoyed sharing with his family.

Leo joined the American Leather Chemists Association as a student member in 1958. In 1959 his membership was changed to associate and then he became a regular active member in 1971. In 1998 he was awarded life membership in the Association. He served the Association in many positions including the following: Council Member from June of 1979 to June of 1981 and again from June of 1989 to June of 1992; Chair of the Committee on Leather from September 1979 to June of 1981; Methods Committee from 1981 to 2002; Research Liaison Committee for 1982 and then Chair from February 1986 to February 1995; Selection Committee for O'Flaherty for 1984 and then Chair for 1995; Nominating Committee 1985, 1987, 1993 and 1997; Chair of Board of Tellers for 1985; Co-Chaired the 1978 symposium on Garment Leather; Specifications Review from 1988 to 2002; Chaired the 1988 and 1989 symposiums on Dyestuff and Pigments – their Use in Coloring Leather; Representative on IULTCS Colorfastness Commission (I.U.F.) 1992 to 1994; and O'Flaherty Award Recipient for 1992;

Although Leo left Boston, he retained his accent and love for the Red Sox, Patriots, lobster, and fried clams. Leo enjoyed fishing, birding, and gardening, but his favorite activity was cutting, splitting, and precisely stacking wood for winter fires in the hearth. With a young family, Leo towed a pop-up camper to state and national parks. As a retiree, he piloted a motorhome from coast to coast and from Alaska to Mexico. Leo was a kind, philanthropic, generous man who supported his entire family throughout their many pursuits and delighted in family gatherings. He was also a dedicated Catholic who never missed weekly mass no matter where he was in the world. Visitation was on June 11 at 10:00 am at Our Lady of Consolation Catholic Church, 4865 11 Mile Rd., Rockford. A Funeral Mass followed at 11:00 am. In lieu of flowers, please consider a donation to the Cornell Lab of Ornithology.

INDEX TO ADVERTISERS

ALCA Annual Meeting	<i>Inside Back Cover</i>
Buckman Laboratories.	<i>Inside Front Cover</i>
Chemtan.	<i>Back Cover</i>
Chemtan.	226
Erretre	263
Stahl	261
Union Specialties Inc	262



**116th ALCA
ANNUAL CONVENTION
Change of Date:
June 21–24, 2022
Eaglewood Resort & Spa
Itasca, IL**

**Featuring the 61st John Arthur Wilson Memorial Lecture
By Randy Johnson, President and CEO
of GST AutoLeather
Title: Road Ahead**

Tentative Schedule

Tuesday, June 21

Golf Tournament, Opening Reception and Dinner

Wednesday, June 22

***John Arthur Wilson Memorial Lecture
All Day Technical Sessions, Fun Run
Reception and Dinner, Activities - Bowling, Pool,
Darts and an Open Bar***

Thursday, June 23

***All Day Technical Sessions, Annual Business Meeting
Activities Awards Luncheon
Social Hour, ALCA Awards Banquet***

***Visit us at www.leatherchemists.org for full details
under Annual Convention as they become available***

www.CHEMTAN.com

Made with
**WATERPROOF
TECHNOLOGY**



Tel: (603) 772-3741 • Fax: (603) 772-0796 • www.CHEMTAN.com