

Robert Y. Lochhead, Ph.D., FRSC, FAIC
Curriculum Vitae

ADDRESS

The School of Polymers and High Performance Materials
118 College Drive, # 10076
The University of Southern Mississippi
Hattiesburg, MS 39406-0076

EDUCATION

Post-doctoral, Fulbright Scholar, Department of Chemical Engineering, Carnegie-Mellon University, 1973-75

Ph.D. in Molecular Rheology and Dielectric Relaxation of Polymer Solutions, Department of Pure and Applied Chemistry, The University of Strathclyde, Scotland, 1970

B.Sc. (Honours), Pure Chemistry, University of Strathclyde, Scotland, 1967

WORK EXPERIENCE

July 1, 2013 – present; **Professor**, School of Polymers and High Performance Materials, **Director of the Institute for Formulation Science**, The University of Southern Mississippi, Hattiesburg, Mississippi. **Director of the National Laboratory for Formulation Science.**

August 2007 –June 30, 2013 **Director and Professor**, School of Polymers and High Performance Materials, **Director of the Institute for Formulation Science**, The University of Southern Mississippi, Hattiesburg, Mississippi. **Director of the National Laboratory for Formulation Science.**

January 2006 –August 2007: **Professor**, School of Polymers and High Performance Materials, **Director of the Institute for Formulation Science**, The University of Southern Mississippi, Hattiesburg, Mississippi

2004 –January 2006. **Interim Director**, School of Polymers and High Performance Materials, The University of Southern Mississippi, Hattiesburg, Mississippi

2003-May 2004 **Professor**, School of Polymers and High Performance Materials, The University of Southern Mississippi, Hattiesburg, Mississippi

2001-2003 **Dean (Interim)**, The College of Science and Technology, The University of Southern Mississippi, Hattiesburg, Mississippi.

2000-2001 **Director**, School of Polymers and High Performance Materials, and **Chair**, Department of Polymer Science, The University of Southern Mississippi, Hattiesburg, Mississippi.

1999-2000 **Chair**, School of Polymers and High Performance Materials, The University of Southern Mississippi, Hattiesburg, Mississippi

1993-1999 **Chair**, Department of Polymer Science, The University of Southern Mississippi, Hattiesburg, Mississippi

1990-93 **Associate Professor**, Department of Polymer Science, The University of Southern Mississippi, Hattiesburg, Mississippi.

1987-95 **Adjunct Faculty Member**, Department of Pharmacy, University of Cincinnati, Cincinnati, Ohio.

1979-90 **R&D Associate to R&D Manager in Hydrophilic Polymers Group**; BF Goodrich, Avon Lake and Brecksville, Ohio. Job content: polymer synthesis and scale-up; applications research; surface and colloid science; formulation science for cosmetics, pharmaceuticals, detergents, and textile print-pastes.

1970-79 **Scientist and Manager**, Unilever Research, Isleworth, England. Job content: polymer synthesis, colloid and surface science.

1961-65 **Laboratory Assistant and Experimental Officer**. Nobel Division of Imperial Chemical Industries, Ardeer, Scotland. Analytical chemistry.

HONORS, PROFESSIONAL SOCIETIES AND EXAMPLES OF SERVICE

Society of Plastics Engineers
 Education Award, 2013
 American Institute of Chemists
 Chemical Pioneer Award, 2012
 The IFSCC Congress,
 Osaka, October 2006. Keynote Speaker.
 Barcelona, Spain October 2008, Invited Speaker.
 The Council Delegate for the USA
 Education Committee
 Melbourne, Australia, October 2009, Invited Speaker
 The Council Delegate for the USA
 Buenos Aires, Argentina, September 2010, Keynote Speaker
 Member of the IFSCC Praesidium
 Gordon Research Conference on Mammalian Skin: Plenary Lecturer, August 2005
 Department of Energy, Committee of Visitors, NABIR, 2004
 State Of Mississippi: "The Governor's Education Achievement Award – Higher Education" 2001 Winner.
 SACS Accreditation reviewer for the University of Houston, Clearlake. 2002
 Peer Reviewer for KTEC, 2001
 American Chemical Society, Member
 American Oil Chemists' Society, Member
 American Soybean Association,
 Member of Surfactants Technical Advisory Board, 1998
 Association of Formulation Chemists
 President 2000-2002
 Senior Vice President 1999
 Vice President, 1998
 Member 1997
Elsevier Science, Colloids & Surfaces A: Physicochemical & Engineering Aspects
 Editorial Board, 1996 to 2004
 Society of Cosmetic Chemists
 President; 2010
 Vice- President; 2009
 Vice- President Elect; 2008
 Fellow of the Society of Cosmetic Chemists
 Recipient of National Merit Award,, 2006
 Recipient of the Maison G. deNavarre Medal Award, *for outstanding contributions to the Art and Science of Cosmetics, The highest honor in Art and Sciences of cosmetics*, 2000
 Accreditation Task Force, 2001 -present
 Committee on Scientific Affairs, 1988- 1997, 1999- 2001, 2006- present
 Editorial Board, 1998-present
 Fellowship Committee, 1998-present
 Merit Award Committee Chair, 1999, 2000
 Chair, Partnership Award Committee, 1998
 Chair, Best Paper Award Committee, 1998
 Committee on Scientific Affairs, 1990 1993, 1998-2002, 2006 –present
 Chair, 1991
 Chair, Strategic Planning Committee, 1996
 Past President, 1994
 President, 1994

Vice President, 1993, 2009
Vice President Elect, 1992, 2008
Executive Board Member, 1992-95, 2007-present
Board Member, 1992-95, 2007-present
Institutional Grants Committee, Chair, 1992
Committee for Chapter Affairs, Presiding Officer, 1992, 2008
Lake Erie Chapter Chair, 1986
National Best Paper Award, 1991
National Best Paper Award, 1995
National Best Paper Award, 1996
National Best Paper Award, 1998
National Best Paper Award, 1999
Best Student Presentation, 2002
National Best Paper Award, 2007
Alan Black Award, 2012
New York Chapter: Best Presentation of the Year Award, 2002
California Chapter: Best Presentation of the year award, 2011

Council for Chemical Research, Inc.

Science Education and Human Resources Committee 1994-1997
Congressional and Interagency Rapid Action Taskforce 2000-2007

Cosmetic, Toiletry and Fragrance Association

Member of International Nomenclature Committee (2003-2007)
Consultant to the C.T.F.A.

Health & Beauty Association.

Invited speaker, Javitts Center, New York, September 2008
Invited Speaker, Javitts Center, New York, September 2009
Invited Speaker, Javitts Center, New York, September 2010
Invited Speaker, Javitts Center, New York, June 2011

La Societe Francaise de Chemie, Le Groupe Formulation, Committee de Science, 2001

Personal Care Products Council

Member of International Nomenclature Committee (2007-present)

The Royal Society of Chemistry

Fellow of the Royal Society of Chemistry
Formulation V1, Stockholm, Sweden, Invited Speaker
The Royal Society of Chemistry: Invited Speaker, Manchester, November, 2005
The Royal Society Formulation Group: Invited Speaker, Manchester, May, 2009
The Royal Society Formulation Group: Invited Speaker/ Nanoformulation, Manchester, June,

2013

United Nations Industrial Development Organization - Mission Expert

RESEARCH INTERESTS

Formulation science
High Output Experimentation

Polymer solution theory
Polymer behavior at interfaces
Polymer/surfactant interaction
Colloid and surface science
Stabilization of dispersions and emulsions using polymers
Controlled release from polymer matrices

PATENTS

Derks, Franciscus; Foster, Stephen; Lochhead, Robert; Maini, Adarsh; Weber, Dirk; Volume up Shampoos II, Preparation; US Patent 8597625, issued December 3, 2013.

Derks, Franciscus; Foster, Stephen; Lochhead, Robert; Maini, Adarsh; Weber, Dirk; Shampoo Preparation; US Patent Application 20130251659, published September 26, 2013.

Lochhead; Robert Y.; Morgan; Sarah E.; Madbouly; Samy; Zong; Yan, "Dispersant for spilled oil", United States Patent Application 20130075337, March 28, 2013.

Lochhead, Robert Y.; Buchanan, Janice P.; Anderson, Laura, L.; Mackey, Nicole, M.; Compositions and methods for protection of skin against thermal insult; US patent Application 20110217247, September 8, 2011

Weber, Dirk; Steven Foster; Robert Lochhead; Frank Derks, Adarsh Maini; 'Shampoo Preparations' EP 201120832 (A), June 19, 2008

Weber, Dirk; Steven Foster; Robert Lochhead; Frank Derks, Adarsh Maini; 'Shampoo Preparations' EP 2010013383 (A), June 19, 2008

"In Vivo Polymerizable Ophthalmic Compositions", Charles, Steven T., Hammer, Mark E., Lang, John C., Lochhead, Robert Y., Mathias, Lon J., European Patent 973,514 B1, March 5, 2003, assigned to Alcon Labs and the University of Southern Mississippi

Hammer; Mark E.; Charles; Steven T.; Lang; John C.; **Lochhead; Robert Y.**; Mathias; Lon J.; United States Patent 6,180,687; January 30, 2001; assigned to Alcon Labs and the University of Southern Mississippi.

Hammer, M. E.; S. T. Charles; J. C. Lang; **R. Y. Lochhead**; L. J. Mathias; "Articles coated with in vivo polymerizable ophthalmic compositions," U. S. Patent No. 6, 124,037, September 26, 2000; assigned to Alcon Labs and the University of Southern Mississippi.

"Polymerizable Mesophases Based on Substituted Unsaturated Carboxylic Acids," **R. Y. Lochhead**; L. J. Mathias; U.S. Patent 6,046,292; April 4, 2000; assigned to The University of Southern Mississippi;

"Single-Phase Soap Compositions," E. T. Lance-Gomez; M. M. Gipp; **R. Y. Lochhead**; C. E. Seaman, Jr.; U.S. Patent 6,007,769; December 28, 1999; assigned to S. C. Johnson & Son, Inc. and The University of Southern Mississippi.

"Surfactants Formed From Menhaden Fish," **R. Y. Lochhead**; R. Bateman; M. Tisack; Mikhail Gololobov; U.S. Patent 5,985,840; November 16, 1999; assigned to The University of Southern Mississippi;

"Polymerizable Mesophases Based on Substituted Unsaturated Carboxylic Acids," **R. Y. Lochhead**; L. J. Mathias; U.S. Patent 5,905,127; May 18, 1999; assigned to The University of Southern Mississippi;

“In Vivo Polymerizable Ophthalmic Compositions,” S. T. Charles; M. E. Hammer; J. C. Lang; **R. Y. Lochhead**; L. J. Mathias; U.S. Patent 5,858,345; January 12, 1999; European Patent 973514A1, World Patent WO9844915A1, assigned to Alcon Laboratories and The University of Southern Mississippi.

“Single-Phase Soap Compositions,” E. T. Lance-Gomez; M. M. Gipp; **R. Y. Lochhead**; C. E. Seaman, Jr.; U.S. Patent 5,820,695; October 13, 1998; European Patent EP0785985A1, World Patent WO9607724A1: assigned to S. C. Johnson & Son, Inc. and The University of Southern Mississippi.

“Emulsions Comprising a High Molecular Weight Anionic Emulsifying Agent,” J. Y. Castaneda and **R. Y. Lochhead**; European Patent 482417 A1; April 29, 1992; assigned to BF Goodrich.

“Bioadhesive Carboxylic Polymers,” C. C. Hsu, **R. Y. Lochhead**, W. F. Masler and E. J. Sehm; European Patent 459373 A2; December 4, 1991; assigned to BF Goodrich.

“Oxidation-Resistant Polymeric Thickeners,” C. C. Hsu, R. F. Koebel, **R. Y. Lochhead**, M. K. Nagarajan, C. E. Sauer, and W. F. Masler; European Patent 435066 A2; July 3, 1991; assigned to BF Goodrich.

“Stable and Quick-Breaking Topical Skin Compositions from Oil-in-Water Emulsions Containing Acrylic Polymers,” **R. Y. Lochhead**, J. Y. Castaneda and W. J. Hemker; European Patent 268164 A2, May 25, 1988; U.S. Patent 5,004,598, April 2, 1991; assigned to BF Goodrich.

“Suspension Composition for Aqueous Surfactant Systems,” **R. Y. Lochhead** and D. S. S. Warfield; U.S. Patent 4,686,254; August 11, 1987; assigned to BF Goodrich.

“Stable Carboxylic Acid Polymers in Mineral Spirits,” **R. Y. Lochhead**, T. R. George, W. L. Banks; United States Patent 4,668,731; May 26, 1987, European Patent EP 214460 A1; March 18, 1987; assigned to BF Goodrich.

“Improved process for polymerizing unsaturated acids in mineral spirits” **R. Y. Lochhead** and J. C. Garcia, European Patent EP0107062B1, October 22, 1986, assigned to the BF Goodrich Company,

“Stable Mineral Spirit Dispersions of Carboxyl-Containing Polymers,” T. R. George and **R. Y. Lochhead**, U.S. Patent 4,536,628; August 20, 1985; assigned to BF Goodrich.

“Polymerizing Unsaturated Acids in Mineral Spirits,” **R. Y. Lochhead** and J. C. Garcia; U.S. Patent 4,420,596; December 13, 1983; assigned to BF Goodrich.

BOOKS, EDITED

Sarah Morgan and Robert Y. Lochhead, “Polymeric Delivery of Therapeutics”, ACS Symposium Series, American Chemical Society, 2010.

Sarah Morgan, Kathleen Havelka, , **Robert Y. Lochhead**, “Cosmetic Nanotechnology”, ACS Symposium Series 961, American Chemical Society, 2007.

JOURNAL ARTICLES/BOOK CHAPTERS

Robert Lochhead, Sarah Morgan, Daniel Savin, Lisa Kemp and Yan Zong; *Mitigating the coastal ecological damage of spilled oil via anti-deposition strategies*. Chapter 27, pp 325 -338 of Mineral Scales in biological and industrial systems, (Z. Amjad, Editor), CRC Press, October, 2013.

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