

JOHN M. KROCHTA
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Position

Professor, Dept. of Food Science & Technology, Dept. of Biological & Agricultural Engineering,
University of California, Davis 95616 (1989-present)

Degrees

B.S., Chemical Engineering, Purdue University, 1965
M.S., Chemical Engineering, University of California, Berkeley, 1967
Ph.D., Chemical Engineering, University of California, Berkeley, 1971

Other Related Experience

Research Chem. Engr, USDA-ARS, Western Regional Research Ctr, Albany, CA (1971-89)

Registered (Professional Engineer) California

Honors and Awards

Phi Eta Sigma (Scholastic Honorary), 1962
Omega Chi Epsilon (National Chemical Engineering Honorary), 1964
Tau Beta Pi (National Engineering Honorary), 1964
Omicron Delta Kappa (National Achievement Honorary), 1964
Graduated first in class with highest honors, Purdue University, 1965
Regents' Fellowship, UC Berkeley, 1965-67
Sigma Xi (Research Honorary), 1967
NDEA Fellowship, UC Berkeley, 1967-71
Registered Professional Engineer in California, 1977
USDA Merit Awards for Creative Research and Leadership, 1986, 1987, 1988
USDA Merit Awards for Patents, 1989, 1991
G. Malcolm Trout Visiting Lecturer and Scholar, Michigan State University, 1997
Peter J. Shields Endowed Chair in Dairy Food Science, 1998-present
Associated Students of University of California, Davis, Teaching Award, 2003
Food Science Students of University of California, Davis, Teaching Award, 2004
UC Davis Food Science & Technology Outstanding Department Citizen, 2007
Institute of Food Technologists (IFT) Fellow, 2008
IFT-Food Packaging Division – Riester-Davis Award for Accomplishments in Packaging, 2008
Associated Students of University of California, Davis, Teaching Award, 2009
International Academy of Food Science & Technology (IAFoST) Fellow, 2010
ISI Highly Cited Researcher

Teaching Areas

Food Preservation
Food Packaging
Mass Transfer in Food and Biological Systems

Recent University Service

- CAES Panel on Future Dairy Industry Product Innovation (Chair)
- Robert Mondavi Institute (RMI) Advanced Materials, Methods & Processing Work Group (Leader)
- RMI Milk Processing Lab Planning Coordinator
- Dept. of Food Science & Technology Teaching Committee (Chair)
- RMI Dairy Technology Day II Conference (Program Coordinator)

Selected Professional Service

- Secretary (2001), Chair-Elect (2002), Chair (2003), Past Chair/Nominations Comm. Chair (2004), Alt. Councilor (2005-06) and Newsletter Editor (2005, 2008) of IFT Food Packaging Division
- Editorial Board, J. of Food Process Engineering
- Reviewer for Biomacromolecules, Food Chem., Food Hydrocolloids. Food Res. Int'l, Food Sci. & Tech. Int'l, J. Ag. & Food Chem., J. Appl. Polymer Sci., J. Food Eng., J. Food Process Eng., J. Food Science, J. Science of Food and Agric., Packaging Technology and Science

Patents

Robertson, George H., Melvin E. Lazar, John M. Krochta, Daniel F. Farkas and John L.

Bomben. Aug. 1978. Method of removing corn from the cob. U.S. Patent No. 4,107,340.

Krochta, J. M. 1989. Production of high yields of glycolic and oxalic acids from polysaccharide containing materials. U.S. Patent No. 4,885,387.

Krochta, J. M. 1991. Coatings for substrates including high moisture edible substrates. U.S. Patent No. 5,019,403.

Krochta, J. M., M. Saltveit and L. Cisneros-Zevallos. 1996. Method for preserving natural color on fresh and minimally-processed fruits and vegetables. U.S. Patent No. 5,547,693.

Krochta, J. M and T.H. McHugh. 1996. Water-insoluble protein-based edible barrier coatings and films. U.S. Patent No. 5,554,164.

Delwiche, M, J. M. Krochta, R. E. Rice and C. Atterholt. 1999. Aqueous emulsion comprising biodegradable carrier for insect pheromones and methods for controlled release thereof. U.S. Patent No. 6,001,326.

Krochta, J. M., S.-Y. Lee, T. A. Trezza and K. L. Dangaran. 2005. Methods and Formulations for Providing Gloss Coatings to Foods and For Protecting Nuts from Rancidity. U.S. Patent No. 6,869,628.

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- Vermeulen, Theodore, Louie Nady, John M. Krochta, Edo Ravoo and Darryl Howery. 1971. Design theory and separations in preparative-scale continuous-flow annular-bed electrophoresis. *Industrial and Engineering Chemistry: Process Design and Development* 10(1):91-102.
- Heftmann, Erich, John M. Krochta, Daniel F. Farkas and Sigmund Schwimmer. 1972. The chromatofuge: An apparatus for preparative rapid radial column chromatography. *Journal of Chromatography* 66(2):365-369.
- Krochta, John M., and Richard J. Bellows. 1974. Cleaning of food: Alternatives to present water use patterns. *Food Technology* 28(2):34-37, 47.
- Krochta, J. M., R.P. Graham and W.W. Rose. 1974. Cleaning of tomatoes using rotating rubber discs. *Food Technology* 28(12):26, 30-32, 34, 48.
- Krochta, John M., Sandra J. Tillin and Linda C. Whitehand. 1975. Ascorbic acid content of tomatoes damaged by mechanical harvesting. *Food Technology* 29(7):28-30, 38.
- Krochta, J.M., T.R. Rumsey and D.F. Farkas. 1975. Defining food R&D needs as a guide for the future. *Food Technology* 29(10):74-76, 78-79, 82-84.
- Krochta, John M., and Bernard Feinberg. 1975. Effects of harvesting and handling on the composition of foods. Part 1. Effects of harvesting and handling on fruits and vegetables. p.98-118, IN: Robert S. Harris and Endel Karmas (eds.), **Nutritional Evaluation of Food Processing**, 2nd ed., Avi Publishing Co., Westport, Connecticut.
- Pavlath, Attila E., Kathryn A. Caldwell and John M. Krochta. 1975. Agriculture 2000. *Chemtech* 5(8):452-458.
- Carroad, Paul A., John M. Krochta and Walter W. Rose. 1976. Water/energy trade-off in cleaning tomatoes. *Food Technology* 30(3):24-26, 28.
- Han, Youn W., Hwe Ik Zhang and John M. Krochta. 1976. Death rates of bacterial spores: Mathematical models. *Canadian Journal of Microbiology* 22(2):295-300.
- Krochta, John M., Robert A. Carlson, Joseph M. Ogawa and Bill T. Manji. 1977. Harvesting into foam reduces tomato losses. *Food Technology* 31(3):42-46.
- Krochta, John M., and Thomas R. Rumsey. 1977. Solar-energy cooling and freezing of food: A computer analysis. *Food Technology* 31(3):61-66, 76.
- Krochta, John M., Robert A. Carlson, Joseph M. Ogawa and Bill T. Manji. 1977. How to DROP the tomato. *Chemtech* 7(8):472-475.

- Robertson, G.H., M.E. Lazar, J.M. Krochta and D.F. Farkas. 1977. Yield, effluent reduction, and organoleptic incentives for intact or unit-kernel sweet corn. *Food Technology* 31(8):58, 60, 62, 64-66.
- Robertson, G.H., M.E. Lazar, W.C. Galinat, D.F. Farkas and J.M. Krochta. 1977. Unit operations for generation of intact or unit kernels of sweet corn. *Journal of Food Science* 42(5):1290-1293, 1303.
- Finley, John W., John M. Krochta and Erich Heftmann. 1978. Rapid preparative separation of amino acids with the chromatofuge. *Journal of Chromatography* 157(1):435-439.
- Krochta, John M. 1978. Air-cushion harvesting of tomatoes. *Food Technology* 32(10):78-82.
- Krochta, John M., and Kevin T. Look. 1978. Reduction of energy in wet corn milling. p.495-502, IN: R.A. Fazzolare and C.B. Smith (eds.), **Energy Use Management, Vol. III/IV**, Pergamon Press, New York.
- Krochta, John M. 1979. Energy analysis for ethanol from biomass. p.1956-1963, IN: Rocco A. Fazzolare and Craig B. Smith (eds.), **Changing Energy Use Future, Vol. IV**, Pergamon Press, New York.
- Barton, Weldon V., Harry E. Brown, Don A. Fink and John M. Krochta. 1979. The USDA loan-guarantee program for industrial hydrocarbons and alcohols pilot projects. p.A10-A16, IN: Rocco A. Fazzolare and Craig B. Smith (eds.), **Changing Energy Use Futures, Vol. VI**, Pergamon Press, New York.
- Krochta, John M. 1980. Energy analysis for ethanol. *California Agriculture* 34(6):9-11.
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- Krochta, J.M., K.T. Look, J.S. Hudson and A.E. Pavlath. 1981. Extraction with ethanol as an energy-saving alternative to conventional drying of corn starch. *Journal of Food Science* 46(4):1054-1058, 1063.
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- Krochta, John M., Joyce S. Hudson and Sandra J. Tillin. 1988. Thermochemical conversion of biomass with concentrated alkaline solution to organic acids. p.399-410, IN: J. Kuester and T. Bridgewater (eds.), **Research in Thermochemical Biomass Conversion**, Elsevier Publishers, Ltd., London.
- Krochta, John M., Joyce S. Hudson and Sandra J. Tillin. 1988. Kinetics of alkaline thermochemical degradation of polysaccharides to organic acids. p.119-128, IN: T.A. Milne and E.J. Soltes (eds.), **Production, Analysis and Upgrading of Pyrolysis Oils from Biomass**, ACS Symposium Series, American Chemical Society, Washington, D.C.
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- Mate, J. I., M. E. Saltveit and J. M. Krochta. 1996. Peanut and walnut rancidity: effect of oxygen concentration and relative humidity. *J. Food Science*. 61(2):465-468, 472.
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- Renewable Resources, D. J. Sessa and J. L. Willett (eds), AOCS Press, Champaign, IL. pp. 198-213.
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