

CURRICULUM VITA

SKIP PALENIK

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CURRENT OF 5 JUNE 2008

EDUCATIONAL HISTORY

- University of Illinois at Chicago, Bachelor of Science – Chemistry (ACS) with emphasis on analytical methods.
- McCrone Research Institute, Chicago. Courses in photomicrography, applied polarized light microscopy, identification of small particles, advanced crystallography and scanning electron microscopy.
- Courses in hair microscopy, species identification of paper fibers, paper fiber analysis, pollen identification, microscopy of soil minerals, cement microscopy, pharmacognosy, micro-techniques, wood identification, thin layer chromatography and vegetable fiber identification.

EMPLOYMENT

- Founder, President and Senior Research Microscopist, Microtrace (1992 – present)
- Senior Research Associate, McCrone Associates (1987 – 1992)
- Senior Research Microscopist, McCrone Associates (1979 – 1992)
 - Supervise light microscopy section. Application of polarized light microscopy and microchemical methods to the identification of single particles. Research in new methods to aid in the identification of microscopic particles of minerals, industrial dusts, combustion products, botanical fragments, hairs, fibers and crystals; application of these methods to forensic science, contamination control and airborne particulate studies. Court qualified expert (State, Federal and Foreign courts) in forensic microscopy and chemistry.
- Research Microscopist, McCrone Associates (1974 – 1979)
- Research Assistant, Department of Criminal Justice, University of Illinois at Chicago (1972 – 1974)
 - Analytical chemistry and microscopy applied to criminalistics.
- Research Assistant, Department of Chemistry, University of Illinois at Chicago (1970 – 1972)
 - Coordination compound chemistry and crystallography.
- Intelligence Analyst, United States Army Intelligence, Stuttgart, Federal Republic of Germany (1966 – 1969)

HONORS

- 2009 Recipient of the “Paul L. Kirk Award” the highest honor bestowed by the Criminalistics Section of the American Academy of Forensic Sciences (announced in 2008)
- 2004 Distinguished Scientist Award, Midwestern Academy of Forensic Sciences -

PROFESSIONAL AFFILIATIONS

- McCrone Research Institute, Chicago, Board of Directors
- American Chemical Society, Member
- American Academy of Forensic Sciences, Member
- American Association of Feed Microscopists, Member
- American Association of Textile Chemists and Colorists, Member
- American Association of Stratigraphic Palynologists, Member
- American Association of Feed Microscopists, sub-division of American Oil Chemists Society, Member.
- California Association of Criminalistics, Member
- Canadian Society of Forensic Science, Member
- Chicago Society for Coatings Technology, Member
- International Association of Wood Anatomists, Member
- Midwestern Association of Forensic Scientists, Member
- State Microscopical Society of Illinois, Member, past President, past Curator
- Queckett Microscopical Club, United Kingdom, Member
- Royal Microscopical Society, United Kingdom, Fellow

TEACHING EXPERIENCE

- Instructor, McCrone Research Institute, Chicago (1975 – present). One to three week short courses in chemical microscopy, applied polarized light microscopy, microchemical analysis, crystallography, hairs, fibers, polymers, botanical fragments and pollens.
- Adjunct Lecturer, University of Illinois at Chicago, School of Pharmacy, Department of Pharmacokinetics (1989 – 1992)
- Adjunct Lecturer, University of Illinois at Chicago, Department of Criminal Justice (1986 – 1989). Quarter courses in Chemical Microscopy and Applied Analytical Chemistry.
- Instructor, Illinois Institute of Technology, Chicago (1975 – 1979). Semester courses in Chemical Microscopy.

SELECTED SHORT COURSES TAUGHT

- Washington State Police
 - Advanced Topics in Trace Evidence Analysis
- Royal Canadian Mounted Police (Canada)
 - Forensic Microscopy
- Pitcon Conference
 - Microscopy & Microanalysis
- Texas Department of Public Safety
 - Forensic Microscopy
 - Forensic Examination of Fibers
- State of North Carolina Crime Laboratory
 - Forensic Microscopy
- New York City Crime Laboratory
 - Special Techniques of Forensic Microscopy
- State of Louisiana Crime Laboratory
 - Forensic Fiber Microscopy
- State of Illinois Crime Laboratory
 - Vegetable Fibers
- California Criminalistics Institute
 - Identification of Animal Hairs
 - Forensic Soil Microscopy
- Forensic Science Service (United Kingdom)
 - Human Hair Comparison
- Linear Health Care
 - Introduction to Pharmacognosy
- State Microscopical Society of Illinois
 - General Microscopy, Forensic Paper Identification
- Forensic Science Foundation
 - Basic Forensic Microscopy
 - Forensic Microscopy of Soils
 - Forensic Microscopy of Botanical Materials
 - Forensic Analysis of Fibers
- United States Customs
 - Analytical Microscopy
- Royal Canadian Mounted Police
 - Forensic Fiber Microscopy
- Louisiana State Crime Laboratories
 - Forensic Hair Microscopy

- 3M Research Laboratories
 - Microchemical Analysis
- Campbell Center for Historic Conservation (Museum Conservators)
 - Identification of Plant Fibers of Ethno-botanical Interest
 - Microchemistry for Objects Conservators

PUBLICATIONS

Palenik, S.J. (2007) Heavy Minerals in Forensic Science, in Heavy Minerals in Use, ed. M. Mange: Elsevier.

Palenik, C.S. and Palenik, S.J. (2004) Forensic Science and Academic Science: Comment on Forensic Science: Oxymoron?. *Science*, 303, 1136.

Bartick, E.G. and Palenik, S.J. (2004) Forensic Analysis, in Encyclopedia of Polymer Science and Technology, John Wiley and Sons, DOI: 10.1002/0471440264.pst140

Palenik, C.S. and Palenik, S.J. (2004) Forensic Microscopy, in Encyclopedia of Analytical Sciences, 2nd Ed., eds. Worsfold, P., Townshend, A and Poole, C. Elsevier, NY.

Palenik, SJ, Dust. *Encyclopedia of Forensic Science*, Academic Press (2000).

Palenik, SJ, Microchemistry. *Encyclopedia of Forensic Science*, Academic Press (In Press).

Palenik, SJ, Microscopy. *Encyclopedia of Forensic Science*, Academic Press (2000).

Palenik, SJ, Wood Identification. *Encyclopedia of Forensic Science*, Academic Press (2000).

Palenik, SJ, Fiber Microscopy. In: *Forensic Examination of Fibers*, 2nd Ed., Grieve, M, Ed. John Wiley & Sons, 1999.

Palenik, SJ, Isolation and Identification of Paint Pigments by Sublimation. *Crime Laboratory Digest*, Vol. 23, 1, 1996.

Palenik, SJ and Fitzsimons, CA, Fiber Cross-Sections, Part I. *The Microscope*, Vol. 38, 187-195, 1990.

Palenik, SJ and Fitzsimons, CA, Fiber Cross-Sections, A New Method for Preparing Sections, Part II. *The Microscope*, Vol. 38, 313-320, 1990.

Palenik, SJ, Microscopy and Microchemistry of Physical Evidence. In: *Forensic Science Handbook*, Vol. 2, Richard Saferstein, Ed., Prentice Hall, 1988.

Palenik, SJ, Forensic Aspects of Polymer Analysis. *Encyclopedia of Polymer Science and Engineering*, 2nd ed., Vol. 7, John Wiley & Sons, 279-289, 1987.

Palenik, SJ, Light Microscopy of Medullary Micro-structures in Hair Identification, *The Microscope*, Vol. 30, 129-138, 1982.

Palenik, SJ, Microscopic Trace Evidence – The Overlooked Clue, Part I, Albert Schneider Looks at Some String. *The Microscope*, Vol. 30, 93-100 1982.

Palenik, SJ, Microscopic Trace Evidence – The Overlooked Clue, Part II, Max Frei – Sherlock Holmes with a Microscope. *The Microscope*, Vol. 30, 163-170, 1982.

Palenik, SJ, Microscopic Trace Evidence – The Overlooked Clue, Part III, E.O. Heinrich – “The Wizard of Berkeley”. Traps a Left-Handed Lumberjack. *The Microscope*, Vol. 30, 281-290, 1982.

Palenik, SJ, Microscopic Trace Evidence – The Overlooked Clue, Part IV, Arthur Koehler – Wood Detective. *The Microscope*, Vol. 31, 1-14, 1983.

Palenik, SJ and McCrone WC, The Solids We Breathe. *Industrial Research*, April 1977.

Palenik, SJ, Microscopy and the Law. *Industrial Research and Development*, March 1979.

Palenik, SJ, Microchemical Tests in Particle Identification. The Particle Atlas, Vol. 5, Ann Arbor Publishers, 1979.

Palenik, SJ, Microscopical Examination of Air Pollutants. The Particle Atlas, Vol. 5, Ann Arbor Publishers, 1979.

Palenik, SJ, The determination of Geographical Origin of Dust Samples. The Particle Atlas, Vol. 5, Ann Arbor Publishers, 1979.

Palenik, SJ and Delly, JG, Is it Jade? The Microscope in Art and Archaeology. *Industrial Research*, May 1976.

PROFESSIONAL PRESENTATIONS (SELECTED PAPERS)

Over 100 papers presented at professional meetings and seminars.

- Forensic Microscopy. Invited presentation at Cambridge University, England, June 2008.
- Trace Evidence and the Law. Presentation during “Short Course for Prosecutors and Defense Attorneys” at Northwestern University, August, 2005.
- Forensic Microscopy. Lawrence Livermore National Laboratory, April 14, 2004.
- Microscopic Trace Evidence: The Overlooked Clue, Wesleyan University, Middleton, CT, February 25, 2004
- Practical aspects of electron microscopy in the trace evidence laboratory, Forensic Microscopy- Spreading best practice, Royal Microscopical Society, Oxfordshire, England. June 20, 2003
- Casework examples illustrating the integration of polarized light microscopy and scanning electron microscopy in the study of microscopic trace evidence, Scanning 2003, May 3, 2003
- Forensic Soil Examination, Forensic Geoscience: Principles, Techniques and Applications, The Geological Society, Burlington House, London. March 3-4, 2003
- Just say it ain't so, Joe: Analysis of Joe DiMaggio signed jerseys, Inter/Micro-02, Chicago, IL. June 24-29, 2002
- Microscopy in the Pharmaceutical Industry, The Procter and Gamble Co., September, 2002.
- Microscopy and Terrorism, State Microscopical Society of Illinois, May 11, 2002

- Light and electron microscopy in soil investigation, Inter/Micro-01, Chicago, IL. June 25-28, 2001
- Accessories and components for the microscopist, Inter/Micro-00, Chicago, IL. June 26-29, 2000
- Contribution of chemical microscopy to trace evidence analysis, 219th Annual American Chemical Society Meeting - Division of Analytical Chemistry. March 26-30, 2000
- Fundamental of forensic microscopy, Federation of Analytical Chemistry and Spectroscopy Societies, 2000
- Splitting hairs: for fun and (intellectual) profit, Inter/Micro-99, Chicago, IL. June 28-July 1, 1999
- Putting chemistry back into chemical microscopy, Inter/Micro-98, Chicago, IL. August 10-12, 1998
- Let's take a dip - Lecture/demonstration on immersion microscopy, Inter/Micro-97, Chicago, IL. July 21-23, 1997
- Compensators for all seasons - Lecture/demonstration on compensators, Inter/Micro-95, Chicago, IL. July 11-13, 1995
- The forensic examination of particles recovered from surfaces, Microbeam Analysis Society, June 1-4, 1993
- Methods for the Identification of Vegetable Fibers, Forensic Microscopy Session: Skip Palenik, Chairman. Inter/Micro-93, Chicago, IL, 1993.
- Micro-FTIR Spectroscopy of Acrylic Fibers, American Academy of Forensic Sciences, 42nd Annual meeting, Cincinnati, OH, 1990.
- Forensic Microscopy as an Investigative Tool, Crime Scene Investigation Seminar, California Association of Criminalists, Santa Ana, CA, 1988.
- The Microscope – The Most Versatile Diagnostic and Analytical Tool in the Materials Sciences. Carl Zeiss Annual Dealer Symposium, Phoenix, AZ, 1988.
- Evidential Value of Cotton Fibers. Trace Evidence Analysis: Skip Palenik, Chairman. Eastern Analytical Symposium, Silver Jubilee, New York City, NY, 1986.
- Light Microscopy: Chemistry at the Picogram Level. Pharmaceutical Applications of Microscopy, American Pharmaceutical Association Meeting, Minneapolis, MN, 1985.
- FTIR Spectroscopy Coupled with Microscopy – A New Tool for the Forensic Scientist. American Chemical Society Meeting, Miami, FL, 1985.
- Advances in Solution of Crimes. Press Conference, American Chemical Society Meeting, Miami, FL, 1985.
- Microscopical Techniques for the Examination of Soil in Criminal Cases. International Association of Forensic Sciences, Oxford, 1984.

- Parmacognosy as a Tool for the Analytical Microscopist. Inter/Micro-84, Chicago, IL 1984.