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Assistant Professor of Forensic Science
College of Criminal Justice
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Degree Earned

Ph.D. in Chemistry, Carleton University, Ottawa, ON, Canada, 2006
M.S. in Forensic Science, Central Police University, Taiwan, 2000
B.S. in Forensic Science, Central Police University, Taiwan, 1994

Professional Licensure and Certifications

Physical Significance of Bloodstain Evidence, Laboratory of Forensic Science, Corning, NY.

Peer-Review Publications and Artistic Performances/Exhibitions

Articles

Yu, J.C.C.; Lai, E.P.C. Review: Molecularly Imprinted Polymers for Ochratoxin A Extraction and Analysis. *Toxins* **2010**, *2*(6), 1536-1553.

Jackson, R.; Petrikovics, I.; Lai, E.P.C.; Yu, J.C.C. Molecularly imprinted polymer stir bar sorption extraction and electrospray ionization tandem mass spectrometry for determination of 2-aminothiazoline-4-carboxylic acid as a marker for cyanide exposure in forensic urine analysis. *Analytical Methods* **2010**, *2*, 552-557.

Ehmann, R.; Yu, J.C.C. Determination of energization state of xenon high intensity discharge automobile headlights. *Forensic Science Journal* **2009**, *8*, 13-28

Burleson, G. L.; Gonzalez, B.; Simons, K.; Yu, J.C.C. Forensic analysis of a single particle of partially burnt gunpowder by solid phase micro-extraction – gas chromatography-nitrogen phosphorus detector. *Journal of Chromatography A* **2009**, *22*, 4679-4683.

Wei, Y.; Qiu, L.; Yu, J.C.C.; Lai, E.P.C. Molecularly imprinted solid phase extraction in a syringe needle packed with polypyrrole-encapsulated carbon nanotubes for determination of ochratoxin A in red wine. *Food Science and Technology International* **2007**, *13*, 375-380.

Yu, J.C.C.; Hrdina, A.; Mancini, C.; Lai, E.P.C. Molecularly imprinted polypyrrole encapsulated carbon nanotubes in stainless steel frit for micro solid phase extraction of estrogenic compounds. *Journal of Nanoscience and Nanotechnology* **2007**, *7*, 3095–3103.

Yu, J.C.C.; Lai, E.P.C. Determination of ochratoxin A in red wines by multiple pulsed elutions from molecularly imprinted polypyrrole. *Food Chemistry* **2007**, *105*, 301-310.

Lu, T.; Lai, E.P.C.; Yu, J.C.C. Hu, F. Analysis for flavonoids in bee pollens by capillary electrophoresis. *Food Science* (ISSN 1002-6630), **2006**, *27*, 582-587.

Lu, T.; Yu, J.C.C.; Li, Y.; Revesz, E.; Lai, E. P.C. Rapid Analysis for Flavonoids in Propolis by Capillary Electrophoresis, *Food Science* (ISSN 1002-6630), **2006**, *27*, 208-213.

Yu, J.C.C.; Lai, E.P.C. Molecularly imprinted polypyrrole modified carbon nanotubes on stainless steel frit for selective micro solid phase pre-concentration of ochratoxin A. *Reactive & Functional Polymers* **2006**, *66*, 702-711.

Yu, J.C.C.; Krushkova, S.; Lai, E.P.C.; Dabek-Zlotorzynsk, E. Molecularly imprinted polypyrrole modified stainless steel frits for selective solid phase pre-concentration of ochratoxin A. *Analytical Bioanalytical Chemistry* **2005**, *381*, 1534-1540.

Yu, J.C.C.; Lai, E.P.C. Interaction of ochratoxin A with molecularly imprinted polypyrrole film on surface plasmon resonance sensor, *Reactive & Functional Polymers* **2005**, *63*, 171-176.

Yu, J.C.C.; Lai, E.P.C. Polypyrrole modified stainless steel frits for on-line micro solid phase extraction of ochratoxin A. *Analytical Bioanalytical Chemistry* **2005**, *381*, 948-952.

Yu, J.C.C.; Lai, E.P.C.; Sadeghi, S. Surface plasmon resonance sensor for Hg(II) detection by binding interactions with polypyrrole and 2-mercaptobenzothiazole, *Sensors & Actuators B: Chemical* **2004**, *101*, 236-241.

Yu, J.C.C.; Lai, E.P.C. Polypyrrole film on miniaturized surface plasmon resonance sensor for ochratoxin A detection. *Synthetic Metals* **2004**, *143*, 253-258.

Chang, W.T.; Yu, J.C.C.; Wang, C.T.; Tsai, Y.Y. A critical evaluation of spectral library searching for the application of automotive paint database. *Forensic Science Journal* **2003**, *2*, 47-58.

Chang, W.T.; Chen, T.H.; Yu, J.C.C.; Kau, J.Y. Comparison of embedding methods used in examining cross-sections of automotive paints with micro - fourier transform infrared spectroscopy. *Forensic Science Journal* **2002**, *1*, 55-60.

Chang, W.T.; Yu, J.C.C. Analyses of naturally weathered automobile paints for the evaluation of spectral library searching by micro/FTIR. *Police Science Quarterly* **2001**, *32*, 149-160.

Chang, W. T.; Giang, Y. S.; Yu, J.C.C. Forensic applications of scanning electron microscopy/ X-ray energy dispersive spectrum (SEM/EDX) on automobile headlight glasses. *Journal of Police Science* **1995**, *26*, 269-282.

Books

N/A

Chapters

Yu, J.C.C.; Lai, E.P.C. Molecularly imprinted polymer nanomaterials for mycotoxin extraction, in American Chemical Society - Mycotoxin Prevention and Control in Agriculture Symposium Series. **2009**, *1031*, Chapter 19, 277-292.

Proceedings

N/A

Artistic Performance

N/A

Artistic Exhibitions

N/A

Research Monographs and Technical Reports

N/A

Funded External Grants

N/A

Peer-Review Presentations/Posters

Stafford, K. Jackson, R. Yu, J.C.C. Petrikovics, I. Analytical method development for determining the biomarker, 2-aminothiazoline-4-carboxylic acid (ATCA), in mice liver after cyanide exposure. The 65th Southwest Regional Meeting of the American Chemical Society, Nov. 5, 2009.

Jackson, R.; Petrickovics, I. Yu, J.C.C. Molecular imprinted polymer stir bar sorption extraction and electrospray ionization tandem mass spectrometry for the analysis of 2-aminothiazoline-4-carboxylic acid, The 2009 Society of Toxicology Annual Meeting, Baltimore, Maryland, March 15–19, 2009

Yu, J.C.C.; Gonzalez, B. Detection of molecular markers for the identification of gunshot Residues by solid phase micro extraction - gas chromatography/nitrogen phosphorous detector (SPME-GC/NPD), The 61st Anniversary Meeting, American Academy of Forensic Science, Feb 22-27, 2009.

Gonzalez, B.; Yu, J.C.C. Optimization of solid phase micro extraction – gas chromatography/nitrogen phosphorous detector for the detection of methyl centralite and ethyl centralite from gun shot residues. The 61st Anniversary Meeting, American Academy of Forensic Science, Feb 22-27, 2009.

Winslett, S. Yu, J.C.C. A hollow fiber assisted ionic liquid surface for stir bar sorptive extraction. The 64th Southwest Regional Meeting of the American Chemical Society, Oct. 1-4, 2008.

Reyna, R.; Gonzalez, B.; Yu, J.C.C. Discovery of molecular markers for gunshot residues by solid phase micro extraction- gas chromatography/nitrogen phosphorous detector (SPME-GC/NPD), The 64th Southwest Regional Meeting of the American Chemical Society, Oct. 1-4, 2008.

Spurlin J.; Chapela P.; Petrikovics, I. Yu, J.C.C. Encapsulation efficiency of organophosphorous hydrolase in lecithin liposomes as determined by capillary electrophoresis. The 64th Southwest Regional Meeting of the American Chemical Society, Oct. 1-4, 2008.

Burleson, G.; Yu, J.C.C. Forensic analysis of single gun powder particle by SPME-GC/NPD (solid phase micro-extraction – gas chromatography/nitrogen phosphorus detector), 235th ACS National Meeting and Exposition, April 6-10, 2008

Yu, J.C.C.; Gross, S. A novel capillary electrophoresis immunoassay for ochratoxin detection using molecular probe of quantum dot bioconjugate, The 63rd Southwest Regional Meeting of the American Chemical Society, November 7, 2007

Gross, S.; Yu, J.C.C. Carbodiimide-mediated reaction with self-assembly nano-structured quantum dots for latent fingerprint development. The 63rd Southwest Regional Meeting of the American Chemical Society, November 5, 2007.

Lloyd, S.; Gross, S.; Yu, J.C.C. Latent fingerprint development using functional quantum dots. The 92nd International Association of Identification Annual Meeting, San Diego, July 24, 2007.

Yu, J.C.C.; Krushkova, S.; Lai, E.P.C.; Dabek-Zlotorzynsk, E. Molecularly imprinted polypyrrole modified stainless steel frits for selective micro solid phase preconcentration, 28th International Symposium on Capillary Chromatography and Electrophoresis, Las Vegas, USA, 22-25, May, 2005.

Work or Professional Experience

2008-present, Assistant Professor of Forensic Science, College of Criminal Justice, Sam Houston State University

2006-2008, Assistant Professor of Chemistry, College of Arts and Science, Sam Houston State University

2006/02-2006/07, Postdoctoral Research Fellow, Health Canada

1999–2002, Forensic scientist, Forensic Science Center, Taipei, Taiwan

1994–1999, Forensic technician, Forensic Science Center, Taipei, Taiwan

Honors and Awards

N/A

Other Competencies

N/A