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Department of Chemical and Biomolecular Engineering
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EDUCATION

Ph.D., Chemical Engineering California Institute of Technology	1993
B.S., Chemical Engineering University of California, Los Angeles	1988

PROFESSIONAL EXPERIENCE

Gore Professor of Chemical Engineering Department of Chemical Engineering, University of Delaware	January 2011-Present
Delaware Biotechnology Institute Faculty Fellow University of Delaware	January 2011- Present
Professor of Chemical Engineering Department of Chemical and Environmental Engineering, University of California, Riverside	July 2002-December 2010
Associate Professor of Chemical Engineering Department of Chemical and Environmental Engineering, University of California, Riverside	July 1998-June 2002
Assistant Professor of Chemical Engineering Department of Chemical and Environmental Engineering, University of California, Riverside	January 1994-June 1998
Faculty Member Microbiology Graduate Program, University of California, Riverside	January 1998-2010
Faculty Member Environmental Toxicology Program, University of California, Riverside	January 1996-2010
Postdoctoral Research Associate Institute of Biotechnology, ETH-Honggerberg, Zurich, Switzerland	November 92-November 93

HONORS

Marvin J. Johnson Award in Microbial & Biochemical Technology, ACS, 2017

Daniel I.C. Wang Award for Excellence in Biochemical Engineering, AIChE and SBE, 2015

Biotechnology Progress Award for Excellence in Biological Engineering Publication, SBE, 2012

Fellows, American Institute for Medical and Biological Engineering (AIMBE), 2011

Gore Professor of Chemical Engineering, January 2011-Present

AIChE Food, Pharmaceutical, and Bioengineering Division Plenary Session, Biochemical Engineering (Area 15c) Award, 2008

Fellows, American Association for the Advancement of Science, 2006

UC Presidential Chair, July 2006-June 2010

Invited Participant of the Fifth Annual U.S./Japan Frontiers of Engineering Symposium, 2005

Invited Participant of the National Academy of Engineering's Fourth Annual Symposium on Frontiers of Engineering, 1998

NSF Faculty Early Career Development Award, 1997

Regents Faculty Fellowship, UCR, 1997

Editor, Biochemical Engineering Journal, 1/16-Present

Associate Editor, Biotechnology Journal, 1/13-Present

Associate Editor, AIChE Journal, 10/16-Present

Associate Editor, Applied Biochemistry and Biotechnology, July 03-Dec 2010

Associate Editor, Biochemical Engineering Journal, 3/08-12/15

Editorial Board, Biotechnology and Bioengineering, 2/03-Present

Editorial Board, Applied and Environmental Microbiology, 1/04-Present

Editorial Board, Microbial Cell Factories, 6/04-7/14

Editorial Board, Journal of Biological Engineering, 1/07-Present

Editorial Board, The Open Biotechnology Journal, 1/08-Present

Editorial Board, Bioengineered Bugs, 9/09-Present

NASA Certificate of Recognition, 1995

National Institutes of Health Predoctoral Traineeship, Caltech, 1990-1992

Corning Graduate Fellowship, Caltech, 1988

Chervon Outstanding Senior Award in Chemical Engineering, UCLA, 1988

Outstanding Junior Award in Chemical Engineering, UCLA, 1987

Munson Memorial Scholarship, UCLA, 1987
Norman Chemistry Award, Los Angeles Valley College, 1985
Mathematical Department Award, Los Angeles Valley College, 1985

RESEARCH INTERESTS

Proteins are the most versatile among the various biological building blocks. However, the strength of proteins - their versatility and specific interactions - also complicates and hinders their systematic design and engineering. Our lab has been interested in exploiting the modular nature of protein domains to design synthetic complexes that can perform new biological functions across different length scales. By adding logical and stimuli responsive components into the design, smart protein complexes can be created to sense and adapt to the constantly changing cellular environments. Research in our laboratory is focused on the development of new synthetic biology tools in connecting exchangeable protein domains into functional devices for applications in biocatalysis, biosensing, and therapeutics.

PUBLICATIONS

250. Andrew Swartz, Xuankuo Xu, Steven Traylor, Zheng Jian Li and **Wilfred Chen**, High-efficiency affinity precipitation of multiple industrial mAbs and Fc-fusion proteins from cell culture harvests using Z-ELP-E2 nanocages, *Biotechnol. Bioeng.*, In Revision.
249. Ka-Hei Siu and **Wilfred Chen**, Engineering sgRNA as toehold switchable riboregulators for programmable control of CRISPR-Cas9 function, *Nature Chem. Biol.*, In Revision.
248. Heejae Kim and **Wilfred Chen**, Reversible Modulation of Antibody-Antigen Interaction by Triggered Assembly and Disassembly of an Artificially Split Protein M, *Biotechnol. Bioeng.*, In Preparation.
247. Rebecca P. Chen, Daniel Blackstock, Qing Sun, and **Wilfred Chen**, Dynamic protein assembly by programmable DNA strand displacement, *Nature Chemistry*, **10**, 474-481, 2018.
246. Fang Liu, **Wilfred Chen**, and Nosang Myung, Controlled growth of gold nanocrystals on biogenic As-S nanotubes by galvanic displacement, *Nanotechnology*, **29**, 055604, 2018.
245. R. Kyle Bennett, Lisa M. Steinberg, **Wilfred Chen**, Eleftherios T. Papoutsakis, Engineering the bioconversion of methane and methanol to fuels and chemicals in native and synthetic methylotrophs, *Curr. Opin. Biotechnol.*, **50**, 81-93, 2018.
244. Andrew Swartz, Xuankuo Xu, Steven Traylor, Zheng Jian Li and **Wilfred Chen**, One-step affinity capture and precipitation for improved purification of an industrial monoclonal antibody using Z-ELP functionalized nanocages, *Biotechnol. Bioeng.*, **115**, 423-432, 2018.
243. Qi Chen, Sooyoun Yu, Nosang Myung, and **Wilfred Chen**, DNA-guided assembly of a five-component enzyme cascade for enhanced conversion of cellulose to gluconic acid and H₂O₂, *J. Biotechnol.*, **263**, 30-35, 2017.

242. Qi Chen, Sharon Rozovsky, and **Wilfred Chen**, Engineering multi-functional bacterial outer membrane vesicles as modular nanodevices for biosensing and bioimaging, *Chem. Comm.*, **53**, 7569-7572, 2017.
241. Andrew S. Gaynor and **Wilfred Chen**, Induced Prodrug Activation by Conditional Protein Degradation, *J. Biotechnol.*, **260**, 62-66, 2017.
240. Ka-Hei Siu and **Wilfred Chen**, Control of the yeast mating pathway by reconstitution of functional α -Factor using split intein-catalyzed reactions, *ACS Synthetic Biology*, **6**, 1453-1460, 2017.
239. Andrew R. Swartz, Qing Sun and **Wilfred Chen**, Ligand-induced crosslinking of Z-ELP-functionalized E2 protein nanoparticles for enhanced affinity precipitation of antibodies, *Biomacromolecules*, **18**, 1654-1659, 2017.
238. Chen Guo, Heejae Kim, Elisa M. Ovadia, Christine M. Mourafetis, Mingrui Yang, **Wilfred Chen**, and April M. Kloxin, Bio-orthogonal conjugation and enzymatically triggered release of proteins within multi-layered hydrogels, *Acta Biomaterialia*, **56**, 80-90, 2017.
237. Ming Dong, Meghan M. Klems, Tara D. Gonzalez, Lisa Steinberg, **Wilfred Chen**, Eleftherios T. Papoutsakis, and Brian J. Bahnson, In vitro methanol production from methyl coenzyme M using the *Methanosarcina barkeri* MtaABC protein complex. *Biotechnol. Prog.*, **33**, 1243-1249, 2017.
236. Mei Yang, Jing Bao, Changjun Hou, Danqun Huo, Qiuchen Dong, Xiaoyu Ma, Xiangcheng Sun, Khaled Hussein Galil, **Wilfred Chen**, and Yu Lei, Sensitive and Selective Electrochemical Biosensor based on ELP-OPH/BSA/TiO₂NFs/AuNPs for Direct Determination of p-Nitrophenyl Substituted Organophosphate Pesticides, *Journal of The Electrochemical Society*, **164**, G17-G22, 2017.
235. Heejae Kim and **Wilfred Chen**, A non-chromatographic protein purification strategy using src 3 homology domains as generalized capture domains, *J. Biotechnol.*, **234**, 27-34, 2016.
234. Maryam Raeeszadeh-Sarmazdeh, Emily Hartzell, J. Vincent Price, and **Wilfred Chen**, Protein Nanoparticles as Multifunctional Biocatalysts and Health Assessment Sensors, *Curr. Opin. Chem. Eng.*, **13**, 109-118, 2016.
233. J. Vincent Price, Long Chen, W. Brian Whitaker, E. Terry Papoutsakis, and **Wilfred Chen**, Scaffoldless Engineered Enzyme Assembly for Enhanced Methanol Utilization, *Proc. Natl. Acad. Sci. USA*, **113**, 12691-12696, 2016.
232. Jing Bao, Changjun Hou, Qiuchen Dong, Xiaoyu Ma, Jun Chen, Danqun Huo, Mei Yang, Khaled Hussein Abd El Galil, **Wilfred Chen**, and Yu Lei, ELP-OPH/BSA/TiO₂ nanofibers/c-MWCNTs based biosensor for sensitive and selective determination of p-nitrophenyl substituted

organophosphate pesticides in aqueous system, *Biosensors and Bioelectronics*, **85**, 935-942, 2016.

231. Qing Sun and **Wilfred Chen**, HaloTag mediated artificial cellulosome assembly on rolling circle amplification DNA template for efficient cellulose hydrolysis, *Chem. Comm.* **52**, 6701-6704, 2016.

230. Ka-Hei Siu, Rebecca P. Chen, Qing Sun, Long Chen, Shen-Long Tsai, and **Wilfred Chen**, Synthetic Scaffolds for Pathway Enhancement, *Curr. Opin. Biotechnol.*, **36**, 98-106, 2015.

229. Qing Sun, Qi Chen, Daniel Blackstock, and **Wilfred Chen**, Post-translational modification of bio-nanoparticles as a modular platform for biosensor assembly, *ACS Nano*, **9**, 8554-8561, 2015.

228. Heejae Kim, Ka-Hei Siu, Maryam Raeeszadeh Sarmazdeh, Qing Sun, Qi Chen, and **Wilfred Chen**, Bioengineering strategies to generate artificial protein complexes, *Biotechnol. Bioeng.*, **112**, 1495-1505, 2015.

227. Qi Chen, Qing Sun, Nicholas M. Molino, Szu-Wen Wang, Eric T. Boder, and **Wilfred Chen**, Sortase A-mediated multi-functionalization of protein nanoparticles, *Chem. Comm.*, **51**, 12107-12110, 2015.

226. Daniel Blackstock and **Wilfred Chen**, Halo-tag mediated self-labeling of fluorescent proteins to molecular beacons for nucleic acid detection, *Chem. Comm.*, **50**, 13735-13738, 2014.

225. Rahul D Sheth, Bharat Bhut, Mi Jin, Zhengjian Li, **Wilfred Chen**, and Steven M. Cramer, Development of an ELP-Z Based mAb Affinity Precipitation Process Using Scaled-Down Filtration Techniques, *J. Biotechnol.*, **192**, 11-19, 2014.

224. Daniel Blackstock, Qing Sun, and **Wilfred Chen**, Fluorescent protein-based molecular beacons by zinc finger protein-guided assembly, *Biotechnol. Bioeng.*, **112**, 236-241, 2015.

223. Kishore K. Krishnani, **Wilfred Chen**, and Ashok Mulchandani, Bactericidal activity of elastin-like polypeptide biopolymer with polyhistidine domain and silver, *Colloids and Surfaces B: Biointerfaces*, **119**, 66-70, 2014.

222. Rahul D. Sheth, Mi Jin, Bharat V. Bhut, Jia Liu, Jongchan Lee, Rieble Siegfried, Zhengjian Li, **Wilfred Chen**, Steven M. Cramer, Affinity precipitation of monoclonal antibody from industrial harvest feedstock using ELP-Z stimuli responsive biopolymers, *Biotechnol. Bioeng.*, **111**, 1595-1603, 2014.

221. Rebecca Chen, Qi Chen, Heejae Kim, Ka-Hei Siu, Qing Sun, Shen-Long Tsai and **Wilfred Chen**, Biomolecular Scaffolds for Enhanced Signaling and Catalytic Efficiency, *Curr. Opin. Biotechnol.*, **28**, 59-68, 2014.

220. Qing Sun, Bhawna Madan, Shen-Long Tsai, Matthew P. DeLisa, and **Wilfred Chen**, Creation of artificial cellulosomes on DNA scaffolds by zinc finger protein-guided assembly for efficient cellulose hydrolysis, *Chem. Comm.*, **50**, 1423-1425, 2014.
219. Miso Park, Qing Sun, Fang Liu, Matthew P. DeLisa, and **Wilfred Chen**, Positional assembly of enzymes on bacterial outer membrane vesicles for cascade reactions, *PLOS one*, **9**, e97103, 2014.
218. Lakshmi N Cella, Payal Biswas, Marylynn V. Yates, Ashok Mulchandani, **Wilfred Chen**, Quantitative assessment of *in vivo* HIV protease activity using genetically engineered QD-based FRET probes, *Biotechnol. Bioeng.*, **111**, 1082–1087, 2014.
217. Daniel Blackstock, Miso Park, Qing Sun, Shen-Long Tsai, and **Wilfred Chen**, Engineering protein modules for diagnostic applications, *Curr. Opin. Chem. Eng.*, **2**, 416–424, 2013.
216. Miso Park, Shen-Long Tsai, and **Wilfred Chen**, Microbial biosensors: Engineered microorganisms as the sensing machinery, *Sensors*, **13**, 5777-5795, 2013.
215. Lakshmi N Cella, Daniel Blackstock, Marylynn A. Yates, Ashok Mulchandani, **Wilfred Chen**, Detection of RNA Viruses: Current technologies and Future perspectives, *Critical Reviews in Eukaryotic Gene Expression*, **23**, 125-137, 2013.
214. Fang Liu, Scott Banta, and **Wilfred Chen**, Functional assembly of a multi-enzyme methanol oxidation cascade on a surface-displayed trifunctional scaffold for enhanced NADH production, *Chem. Comm.*, **49**, 3766-3768, 2013.
213. Rahul D. Sheth, Bhawna Madan, **Wilfred Chen**, Steven M. Cramer, High throughput screening for the development of a monoclonal antibody affinity precipitation step using ELP-Z stimuli responsive biopolymers, *Biotechnol. Bioeng.*, **110**, 2664-2676, 2013.
212. Fang Liu and **Wilfred Chen**, Engineering a recyclable ELP capturing scaffold for non-chromatographic protein purification, *Biotechnol Prog.*, **29**, 968-971, 2013.
211. Nicha Chartuprayoon, Youngwoo Rheem, James C. K. Ng, Jin Nam, **Wilfred Chen**, and Nosang V. Myung, Polypyrrole nanoribbon based chemiresistive immunosensor for viral plant pathogen detection, *Anal. Methods*, **5**, 3497-3502, 2013.
210. Divya Sivaraman, Hsiao-Yun Yeh, Ashok Mulchandani, Marylynn V. Yates and **Wilfred Chen**, Use of flow cytometry for the rapid and quantitative detection of poliovirus-infected cells via TAT peptide-delivered molecular beacons, *Appl. Environ. Microbiol.*, **79**, 696-700, 2013.
209. Shen-Long Tsai, Miso Park, **Wilfred Chen**, Size-modulated synergy of cellulase clustering for enhanced cellulose hydrolysis, *Biotechnol. J.*, **8**, 257–261, 2013.
208. Heejae Kim, Qing Sun, Fang Liu, Shen-Long Tsai, and **Wilfred Chen**, Biologically assembled nanobiocatalysts, *Topics in Catalysis*, **55**, 1138-1145, 2012.

207. Shen-Long Tsai, Nancy A. DaSilva, and **Wilfred Chen**, Functional display of complex cellulosomes on the yeast surface via adaptive assembly, *ACS Synthetic Biology*, **2**, 14-21, 2013.
206. Sneha Srikrishnan, **Wilfred Chen**, and Nancy A. Da Silva, Functional assembly and characterization of a modular xylanosome for hemicellulose hydrolysis in yeast, *Biotechnol. Bioeng.*, **110**, 275–285, 2013.
205. Bhawna Madan, Garima Chaudhary, Steven M. Cramer, and **Wilfred Chen**, ELP-z and ELP-zz capturing scaffolds for the purification of immunoglobulins by affinity precipitation, *J. Biotechnol.*, **163**, 10-16, 2013.
204. Fang Liu, Shen-Long Tsai, Bhawna Madan, and **Wilfred Chen**, Engineering a high-affinity scaffold for non-chromatographic protein purification via intein-mediated cleavage, *Biotechnol. Bioeng.*, **109**, 2829–2835, 2012.
203. Maxwell C. Kum, Hyunsung Jung, Nicha Chartuprayoon, **Wilfred Chen**, Ashok Mulchandani, and Nosang V. Myung, Tuning electrical and optoelectronic properties of single cadmium telluride nanoribbon, *J. Phys. Chem.*, **116**, 9202-9208, 2012.
202. Michael W.Y. Shen, Dhawal Shah, **Wilfred Chen**, Nancy Da Silva, Enhanced arsenate uptake in yeast engineered for overexpression of the *pho84* phosphate transporter, *Biotechnol. Prog.*, **28**, 654–661, 2012.
201. Rajwant S. Bedi, Rui Cai, Cory O’Neill, Derek E. Beving, Stephen Foster, Sean Guthrie, **Wilfred Chen**, and Yushan Yan, Hydrophilic and antimicrobial Ag-exchanged zeolite A coatings: A year-long durability study and preliminary evidence for their general microbiocidal efficacy to bacteria, fungus and yeast, *Microporous and Mesoporous Materials*, **151**, 352-357, 2012.
200. Garima Goyal, Shen Long Tsai, Bhawna Madan, Nancy A. DaSilva, and **Wilfred Chen**, Simultaneous cell growth and ethanol production from cellulose by an engineered yeast consortium displaying a functional mini-cellulosome, *Microb. Cell Factories*, **10**, 89, 2011.
199. Xiaojian Chen, **Wilfred Chen**, Ashok Mulchandani and Umar Mohideen, Application of displacement principle for detecting heavy metal ions and EDTA using microcantilevers, *Sensors & Actuators: B. Chemical*, **161**, 203-208, 2012.
198. Daniela Dunams, Payal Sarkar, **Wilfred Chen**, and Marylynn Yates , Simultaneous detection of infectious human echoviruses and adenoviruses by an in situ nuclease-resistant molecular beacon-based assay, *Appl. Environ. Microbiol.*, **78**, 1548-1588, 2012.
197. Shen-Long Tsai, Shailendra Singh, Nancy A. DaSilva, and **Wilfred Chen**, Co-expression of *Arabidopsis thaliana* phytochelatin synthase and *Treponema denticola* cysteine desulfhydrase for enhanced arsenic accumulation, *Biotechnol. Bioeng.*, **109**, 605–608, 2012.

196. Joun S. Lee, Syed Mubeen, Carlos M. Hangarter, Ashok Mulchandani, **Wilfred Chen**, and Nosang V. Myung, Selective and rapid room temperature detection of H₂S using gold nanoparticle chain arrays, *Electroanalysis*, **23**, 2623-2628, 2011.
195. Shenghua Jiang, Fang Liu, Min-Gyu Kim, Jae-Hong Lim, Kun-Jae Lee, Yong-Ho Choa, Kyung Song, Michael J. Sadowsky, **Wilfred Chen**, Nosang V. Myung, and Hor-Gil Hur, Synthesis of chalcogenide ternary and quaternary nanotubes through directed compositional alterations of bacterial As-S nanotubes, *J. of Materials Chemistry*, **21**, 10277-10279, 2011.
194. Payal Ganguli, **Wilfred Chen**, and Marylynn V. Yates, Detection of Murine Norovirus-1 using TAT peptide delivered molecular beacon, *Appl. Environ. Microbiol.*, **77**, 5517-5520, 2011.
193. Payal Biswas, Lakshmi N Cella, Seung Hyun Kang, Ashok Mulchandani, Marylynn V. Yates, and **Wilfred Chen**, A quantum-dot based protein module for *in vivo* monitoring of protease activity through fluorescence resonance energy transfer, *Chem. Comm.*, **47**, 5259-5261, 2011.
192. Divya Sivaraman, Payal Biswas, Lakshmi N Cella, Marylynn V. Yates and **Wilfred Chen**, Detecting RNA viruses in living mammalian cells by fluorescence microscopy, *Trends in Biotechnol.*, **29**, 307-313, 2011.
191. Basanta K. Das, Chaker Tlili, Sushmee Badhulika, Lakshmi N. Cella, **Wilfred Chen**, and Ashok Mulchandani, Single-walled carbon nanotubes chemiresistor aptasensors for small molecules: picomolar level detection of adenosine triphosphate, *Chem. Comm.*, **47**, 3793-3795, 2011.
190. Shen-Long Tsai, Garima Goyal, and **Wilfred Chen**, Surface display of a functional minicellulosome by intracellular complementation using a synthetic yeast consortium and its application to cellulose hydrolysis and ethanol production, *Appl. Environ. Microbiol.*, **76**, 7514-7520, 2010.
189. Mannagesh A. Banger, **Wilfred Chen**, Nosang V. Myung, and Ashok Mulchandani, Conducting polymer 1-dimensional nanostructures for FET sensors, *Thin Solid Films*, **519**, 964-973, 2010.
188. Fang Liu, Seung Hyun Kang, Young-In Lee, Yong-ho Choa, Ashok Mulchandani, Nosang V. Myung, and **Wilfred Chen**, Enzyme mediated synthesis of phytochelatin-capped CdS nanocrystals, *Appl. Phys. Letts.*, **97**, 123703, 2010.
187. Miso Park, Lakshmi N Cella, **Wilfred Chen**, Nosang V. Myung, and Ashok Mulchandani, Carbon nanotubes-based chemiresistive immunosensor for small molecules: Detection of nitroaromatic explosives, *Biosensors and Bioelectronics*, **26**, 1297-1301, 2010.
186. Dhammanand J. Shirale, Mangesh A. Bangar, **Wilfred Chen**, Nosang V. Myung and Ashok Mulchandani, Effect of Aspect Ratio (Length:Diameter) on a Single Polypyrrole Nanowire FET Device, *J. Phys. Chem.C*, **114**, 13375-13380, 2010.

185. Dhawal Shah, Michael W.Y. Shen, **Wilfred Chen**, Nancy A. Da Silva, Enhanced arsenic accumulation in *Saccharomyces cerevisiae* overexpressing transporters Fps1p or Hxt7p, *J. Biotechnol.*, **150**, 101-107, 2010.
184. Kawai Tam, Cuong Tu, Jin-Hoon Lee, Min Lai, Chong Hyun Chang, Youngwoo Rheem, **Wilfred Chen**, Hor-Gil Hur, and Nosang V. Myung, Growth Mechanism of Amorphous Selenium Nanoparticles Synthesis by *Shewanella* sp. HN-41, *Bioscience, Biotechnology and Biochemistry*, **74**, 696-700, 2010.
183. Mangesh A. Bangar, Dhammanand J. Shirale, Hemant Purohit, **Wilfred Chen**, Nosang V. Myung, and Ashok Mulchandani, Single Conducting Polymer Nanowire Based Sequence-Specific, Base-Pair-Length Dependent Label-free DNA Sensor, *Electroanal.*, **23**, 371-379, 2011.
182. Dhammanand J. Shirale, Mangesh A. Bangar, Miso Park, Marylynn V. Yates, **Wilfred Chen**, Nosang V. Myung and Ashok Mulchandani, Label-Free Chemiresistive Immunosensors for Viruses, *Environ. Sci. Technol.*, **44**, 9030-9035, 2010.
181. Jason L. Cantera, **Wilfred Chen**, and Marylynn V. Yates, A fluorescence resonance energy transfer-based fluorometer assay for screening anti-coxsackievirus B3 compounds, *J. Virol. Methods*, **171**, 176-182, 2011.
180. Lakshmi Cella, **Wilfred Chen**, Nosang V. Myung, and Ashok Mulchandani, Single-Walled Carbon Nanotubes-Based Chemiresistive Affinity Biosensors for Small Molecules: Ultrasensitive Glucose Detection, *J. Am. Chem. Soc.*, **132**, 6024-5026, 2010.
179. Shailendra Singh, Krassimir Bozhilov, Ashok Mulchandani, Nosang Myung, and **Wilfred Chen**, Biologically Programmed Synthesis of Core-Shell CdSe/ZnS Nanocrystals, *Chem. Comm.*, **46**, 1473-1475, 2010.
178. Lakshmi Cella, Pablo Sanchez, Wenwan Zhong, Nosang V. Myung, **Wilfred Chen**, Ashok Mulchandani, Nano aptasensor for protective antigen toxin of Anthrax, *Anal. Chem.*, **82**, 2042-2047, 2010.
177. Shailendra Singh, Seung Hyun Kang, Wonkyu Lee, Ashok Mulchandani, and **Wilfred Chen**, Systematic Engineering of Phytochelatin Synthesis and Arsenic Transport for Enhanced Arsenic Accumulation in *E. coli*, *Biotechnol. Bioeng.*, **105**, 780-785, 2010.
176. Shen-Long Tsai, Shailendra Singh, and **Wilfred Chen**, Arsenic Metabolism by Microbes in Nature and the Impact on Arsenic Remediation, *Curr. Opin. Biotechnol.*, **20**, 659-667, 2009.
175. Zheng Liu, Chao Yang, Hong Jiang, Ashok Mulchandani, **Wilfred Chen**, and Chuanling Qiao, Simultaneous Degradation of Organophosphates and 4-Substituted Phenols by *Stenotrophomonas* Species LZ-1 with Surface-Displayed Organophosphorus Hydrolase, *J. Agric. Food Chem.*, **51**, 6171-6177, 2009.

174. Jason L. Cantera, **Wilfred Chen**, and Marylynn V. Yates, Detection of infective Poliovirus by a simple, rapid, and sensitive flow cytometry method based on fluorescence resonance energy transfer technology, *Appl. Environ. Microbiol.*, **76**, 584-588, 2010.
173. Hsiao-Yun Yeh, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Molecular beacon-quantum dot-Au nanoparticle hybrid nanoprobe for visualizing virus replication in living cells, *Chem. Comm.*, **46**, 3914–3916, 2010.
172. Shen-Long Tsai, Jeongseok Oh, Shailendra Singh, Ruizhen Chen, and **Wilfred Chen**, Functional assembly of mini-cellulosomes on the yeast surface for cellulose hydrolysis and ethanol production, *Appl. Environ. Microbiol.*, **75**, 6087-6093, 2009.
171. Cindy H. Wu, Stéphanie M. Bernard, Gary L. Andersen and **Wilfred Chen**, Developing microbe–plant interactions for applications in plant-growth promotion and disease control, production of useful compounds, remediation and carbon sequestration, *Microbial Biotechnology*, **2**, 428–440, 2009.
170. Huimin Zhao and **Wilfred Chen**, Chemical biotechnology: microbial solutions to global change, *Curr. Opin. Biotechnol.*, **19**, 541–543, 2008.
169. Mangesh A. Bangar, D. J. Shirale, **Wilfred Chen**, Nosang V. Myung and Ashok Mulchandani, Single conducting polymer nanowire chemiresistive label-free immunosensor for cancer biomarker, *Anal. Chem.*, **81**, 2168–2175, 2009.
168. Hsiao-Yun Yeh, Marylynn V. Yates, **Wilfred Chen**, and Ashok Mulchandani, Real-time molecular methods to detect infectious viruses: a minireview, *Seminars in Cell & Developmental Biology*, **20**, 49–54, 2009. (Invited Contribution)
167. Chao Yang, Yaran Zhu, Jijan Yang, Zheng Liu, Chuanling Qiao, Ashok Mulchandani, and **Wilfred Chen**, Development of an autofluorescent whole-cell biocatalyst by displaying dual functional moieties on *Escherichia coli* and construction of a co-culture with organophosphate mineralizing activity, *Appl. Environ. Microbiol.*, **74**, 7733–7739, 2008.
166. Mangesh A. Banger, Carlos M. Hangarter, Bongyoung Yoo, Youngwoo Rheem, **Wilfred Chen**, Ashok Mulchandani, and Nosang Myung, Magnetically assembled multi-segmented nanowires and their applications, *Electroanalysis*, **21**, 61-67, 2009.
165. C.L. Aravinda, Serge Cosnier, **Wilfred Chen**, Nosang V. Myung, and Ashok Mulchandani, Label-free detection of cupric ions and histidine-tagged proteins using single poly(pyrrole)-NTA chelator conducting polymer nanotube chemiresistive sensor, *Biosensors and Bioelectronics*, **24**, 1451–1455, 2009.
164. Hsiao-Yun Yeh, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Visualizing the dynamics of viral replication in living cells via TAT-peptide delivery of nuclease-resistant molecular beacons, *Proc. Natl. Acad. Sci. USA*, **105**, 17522-17525, 2008.

163. Cindy H. Wu, David Le, Ashok Mulchandani, and **Wilfred Chen**, Optimization of a whole-cell cadmium sensor with a toggle gene circuit, *Biotechnol. Prog.*, **25**, 898–903, 2009.
162. Shailendra Singh, Seung Hyun Kang, Ashok Mulchandani and **Wilfred Chen**, Bioremediation: Environmental Clean Up Through Pathway Engineering, *Curr. Opin. Biotechnol.*, **19**, 437–444, 2008. (Invited Contribution)
161. Chao Yang, Qiao Zhao, Zheng Liu, Qiyun Li, Chuanling Qiao, Ashok Mulchandani, and **Wilfred Chen**, Cell surface display of functional macromolecule fusions on *Escherichia coli* for development of a bioluminescent whole-cell biocatalyst, *Environ. Sci. Technol.*, **42**, 6105–6110, 2008.
160. Maxwell C. Kum, Bong Young Yoo, Young Woo Rheem, Krassimir N. Bozhilov, **Wilfred Chen**, Ashok Mulchandani, and Nosang V. Myung, Synthesis and characterization of cadmium telluride nanowire, *Nanotechnology*, **19**, 325711, 2008.
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158. S. Sandhya, **Wilfred Chen** and Ashok Mulchandani, Molecular Beacons: A Real-Time Polymerase Chain Reaction Assay for Detecting *Escherichia coli* from Fresh Produce and Water, *Analytica Chimica Acta*, **614**, 208–212, 2008.
157. Lianbin Xu, Zhongwei Chen, **Wilfred Chen**, Ashok Mulchandani, and Yushan Yan, Electrochemical synthesis of perfluorinated ions doped conducting polyaniline films consisting of helical fibers and their reversible switching between superhydrophobicity and superhydrophilicity, *Macromolecular Rapid Communications*, **29**, 832–838, 2008.
156. Carlos N. Hangarter, Mangesh Banger, Sandra C. Hernandez, **Wilfred Chen**, Marc A. Deshusses, Ashok Mulchandani, and Nosang V. Myung, Maskless electrodeposited contact for conducting polymer nanowires, *Appl. Phys. Letts*, **92**, 073104, 2008.
155. Shailendra Singh, Ashok Mulchandani, and **Wilfred Chen**, Highly Selective and Rapid Arsenic Removal by Metabolically Engineered *E. coli* Expressing *Fucus vesiculosus* Metallothionein, *Appl. Environ. Microbiol.*, **74**, 2924–2927, 2008.
154. Cindy H. Wu, Ashok Mulchandani, and **Wilfred Chen**, Versatile microbial surface-display for environmental remediation and biofuels production, *Trends in Microbiology*, **16**, 181–188, 2008. (Invited Review)
153. Seung Hyun Kang, Krassimir N. Bozhilov, Nosang V. Myung, Ashok Mulchandani and **Wilfred Chen**, Microbial synthesis of CdS nanocrystals in genetically engineered *E. coli*, *Angewandte Chemie International Edition*, **47**, 5186–5189, 2008.

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42. Ashok Mulchandani, Priti Mulchandani, **Wilfred Chen**, Joseph Wang, Liang Chen. Field-deployable enzyme electrodes for direct monitoring of organophosphate nerve agents. In: *Enzymes in Heteroatom Chemistry: Green solutions for chemical problems.* (Zwanenburg, B. et al., eds.), Kluwer Academic Publishers. The Netherlands, pp.287-296, 2000.
41. **Wilfred Chen**, Richard D. Richins, Priti Mulchandani, Irina Kaneva, and Ashok Mulchandani. Biodegradation of Organophosphorus Nerve Agents By Surface Expressed Organophosphorus Hydrolase. In: *Enzymes in heteroatom chemistry: Green solutions for chemical reactions.* (Zwanenburg, B. et al., eds.), Kluwer Academic Publishers. The Netherlands, pp. 211-222, 2000.
40. Ayman Mansee, **Wilfred Chen**, and Ashok Mulchandani, Biodetoxification of coumaphos insecticide using immobilized *Escherichia coli* expressing organophosphorus hydrolase enzyme on cell surface, *Biotechnol. Bioprocess Eng.*, **5**, 436-440, 2000.

39. Mark Shimazu, Ashok Mulchandani, and **Wilfred Chen**, Cell Surface Display of Organophosphorus Hydrolase Using Ice Nucleation Protein, *Biotechnol. Prog.*, **17**, 76-80, 2001.
38. Nathalie Fortin, Ashok Mulchandani, and **Wilfred Chen**, Use of real-time polymerase chain reaction and molecular beacon for the detection of *Escherichia coli* O157:H7, *Anal. Biochem.*, **289**, 281-288, 2001.
37. **Wilfred Chen**, Ashok Mulchandani, and Joseph DeFrank, Biodegradation of Chemical Weapons, in *Encyclopedia of Environmental Microbiology*, John Wiley & Sons (invited contribution), 844-852, 2001.
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35. **Wilfred Chen**, Grisselle Martinez and Ashok Mulchandani, Molecular Beacons: A New Approach for Detecting Salmonella Species, Sadik, O.A. and Mulchandani, A. (eds.), ACS Symposium Series No. 762, ACS, Washington, DC, pp.292-298, 2000.
34. Richard D. Richins, Ashok Mulchandani, and **Wilfred Chen**, Expression, Immobilization, and Enzymatic Characterization of Cellulose-Binding Domain-Organophosphorus Hydrolase Fusion Proteins, *Biotechnol. Bioeng.*, **69**, 591-596, 2000.
33. **Wilfred Chen**, Grisselle Martinez, and Ashok Mulchandani, Molecular Beacons: A Real-Time Polymerase Chain Reaction Assay for Detecting *Salmonella*, *Anal. Biochem.*, **280**, 166-172, 2000.
32. **Wilfred Chen**, Fredi Bruhlman, Kelvin H. Lee and Marc A. Deshusses, Whole Cell Catalysis, in *Encyclopedia of Catalysis*, John Wiley & Sons (invited contribution), Vol. 6, 658-680, 2003.
31. Fredi Bruhlmann and **Wilfred Chen**, Transformation of Polychlorinated Biphenyl by a Novel BphA variant through the meta-cleavage pathway, *FEMS Microbiol. Lett.*, **179**, 203-208, 1999.
30. Joseph Wang, Liang Chen, Ashok Mulchandani, Priti Mulchandani, and **Wilfred Chen**, Remote Biosensor for in-situ Monitoring of Organophosphate Nerve Agents. *Electroanalysis*, **11**, 866-869, 1999.
29. **Wilfred Chen** and Ashok Mulchandani, Detoxification of pesticides, *Biofutur*, **187**, 41-43, 1999.
28. Ashok Mulchandani, Priti Mulchandani, **Wilfred Chen**, Joseph Wang, and Liang Chen, Amperometric Thick-Film Strip Electrodes for Monitoring Organophosphate Nerve Agents Based on Immobilized Organophosphorus Hydrolase, *Anal. Chem.*, **71**, 2246-2249, 1999.
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26. **Wilfred Chen**, Fredi Bruhlmann, Richard Richins, and Ashok Mulchandani, Engineering of Improved Enzymes and Microbes for Bioremediation, *Curr. Opin. Biotechnol.*, **10**, 137-141, 1999.
25. Fredi Bruhlmann and **Wilfred Chen**, Tuning Biphenyl Dioxygenases for Extended Substrate Specificity, *Biotechnol. Bioeng.*, **63**, 544-551, 1999.
24. Ashok Mulchandani, Shengtian Pan and **Wilfred Chen**, Fiber-Optic Enzyme Biosensor for Direct Determination of Organophosphate Nerve Agents, *Biotechnol. Prog.*, **15**, 130-134, 1999.
23. Leila H. Choe, **Wilfred Chen** and Kelvin H. Lee, Proteome Analysis of Fis Overproduction in *Escherichia coli*, *Electrophoresis*, **20**, 798-805, 1999.
22. Ashok Mulchandani, Irina Kaneva and **Wilfred Chen**, Detoxification of Organophosphate Nerve Agents by Immobilized *Escherichia coli* with Surface-Expressed Organophosphorus Hydrolase, *Biotechnol. Bioeng.*, **63**, 216-223, 1999.
21. Ashok Mulchandani, Priti Mulchandani and **Wilfred Chen**, Enzyme Biosensor for Determination of Organophosphates, *Field Analytical Chemistry and Technology*, **2**, 363-369, 1998.
20. Irina Kaneva, Priti Mulchandani, Richard Richins, Ashok Mulchandani, and **Wilfred Chen**. 1998. Biodetoxification and Monitoring of Organophosphorus Nerve Agents by surface-Expressed Organophosphorus Hydrolase. In Proceedings of the 1997 ERDEC Scientific Conference on Chemical & Biological Defense Research, 18-21 November 1997, ERDEC-SP-063, 251-255.
19. Priti Mulchandani, Ashok Mulchandani, Irina Kaneva and **Wilfred Chen**, Biosensor for Direct Determination of Organophosphate Nerve Agents. 1. Potentiometric Enzyme Electrode, *Biosens. Bioelectron.*, **14**, 77-85, 1999.
18. Ashok Mulchandani, Irina Kaneva and **Wilfred Chen**, Biosensor for Direct Determination of Organophosphate Nerve Agents Using Recombinant *Escherichia coli* with Surface-Expressed Organophosphorus Hydrolase. 2. Fiber-Optic Microbial Biosensor, *Anal. Chem.* **70**, 5042-5046, 1998.
17. Ashok Mulchandani, Priti Mulchandani, Irina Kaneva, and **Wilfred Chen**, Biosensor for Direct Determination of Organophosphate Nerve Agents Using Recombinant *Escherichia coli* with Surface-Expressed Organophosphorus Hydrolase. 1. Potentiometric Electrode, *Anal. Chem.*, **70**, 4140-4145, 1998.
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15. Irina Kaneva, Ashok Mulchandani, and **Wilfred Chen**, Factors Influencing Parathion Degradation by Recombinant *E. coli* with Surface-Expressed Organophosphorus Hydrolase, *Biotechnol. Prog.*, **14**, 275-278, 1998.
14. **Wilfred Chen** and Ashok Mulchandani, The Use of Live Biocatalysts for Pesticide Detoxification, *Trends in Biotechnology*, **16**, 71-76, 1998.
13. Richard Richins, Irina Kaneva, Ashok Mulchandani, and **Wilfred Chen**, Biodegradation of Organophosphorus Pesticides by Surface-Expressed Organophosphorus Hydrolase, *Nature Biotechnology*, **15**, 984-987, 1997.
12. Richard Richins, Tin Htay, Pauli Kallio, and **Wilfred Chen**, Elevated Fis Expression Enhances Recombinant Protein Synthesis in *Escherichia coli*, *Biotechnol. Bioeng.*, **56**, 138-144, 1997.
11. Neilay Dedhia, **Wilfred Chen** and James E. Bailey, Design of Expression Systems for Metabolic Engineering: Coordinated Synthesis and Degradation of Glycogen, *Biotechnol. Bioeng.*, **55**, 419-426, 1997.
10. Marc A. Deshusses, **Wilfred Chen**, Ashok Mulchandani, and Irving J. Dunn., Innovative Bioreactors, *Curr. Opin. Biotechnol.*, **8**, 165-168, 1997.
9. Neilay N.Dedhia, Richard Richins, Archie Mesina, and **Wilfred Chen**, Improvement in Recombinant Protein Production in ppGpp-Deficient *Escherichia coli*, *Biotechnol. Bioeng.*, **53**, 379-386, 1997.
8. **Wilfred Chen**, Pauli Kallio and James Bailey, Process Characterization of a Novel Cross-Regulation System for Cloned Protein Production in *Escherichia coli*, *Biotechnol. Prog.*, **11**, 397-402, 1995.
7. **Wilfred Chen**, Pauli Kallio, and James E. Bailey, Cross-Regulation of Gene Expression in Recombinant Cells, US Patent Number 5,416,800, 1995.
6. **Wilfred Chen**, Dallas E. Hughes and James E. Bailey, Intracellular Expression of Vitreoscilla Hemoglobin Alters Aerobic Metabolism of *Saccharomyces cerevisiae*, *Biotechnol. Prog.*, **10**, 308-313, 1994.
5. **Wilfred Chen** and James E. Bailey, Application of the Cross-Regulation System as a Metabolic Switch, *Biotechnol. Bioeng.*, **43**, 1190-1193, 1994.
4. **Wilfred Chen**, Pauli Kallio, S.B. Lee, and James E. Bailey, Invention of a Useful Transcriptional Regulation System Using Mechanistic Mathematic Modelling, p. 155-158, in *Modern Trends in Biothermokinetics* (S. Schuster, M. Rigoulet, R. Ouhabi, and J.P. Mazat, Eds), Plenum Press, New York, U.S.A., 1993.

3. **Wilfred Chen**, Pauli Kallio and James E. Bailey, Construction and Characterization of a Novel Cross-Regulation System for Regulating Cloned-Gene Expression in *E. coli*, *Gene*, **130**, 15-22, 1993.
2. Neilay Dedhia, Thomas Hottiger, **Wilfred Chen**, and James E. Bailey, Genetic Manipulation of Central Carbon Metabolism in Escherichia coli, p. 59-62 in *Harnessing Biotechnology for the 21st Century* (M. R. Ladisch and A. Bose, Eds), American Chemical Society, New York, 1992.
1. **Wilfred Chen**, James E. Bailey and Sun Bok Lee, Molecular Design of Expression Systems: Comparison of Different Repressor Control Configurations Using Molecular Mechanism Models, *Biotechnol. Bioeng.*, **38**, 679-687, 1991.

INVITED LECTURES

1. “Building Complex Protein Functions at the Intersection of Nanofabrication and Synthetic Biology”, NUS Synthetic Biology for Clinical and Technological Innovation, National University of Singapore, March 9, 2018.
2. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biomolecular Engineering, National University of Singapore, March 8, 2018.
3. “Adding Logic to Complex Protein Functions”, 5th International Conference on Cellular & Molecular Bioengineering (ICCMB5), Plenary Speaker, School of Chemical and Biomedical Engineering, Nanyang Technological University, March 5, 2018.
4. “Adding Logic to Complex Protein Functions”, Department of Chemical Engineering, University of Michigan, February 13, 2018.
5. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Center for Bio/Molecular Science and Engineering colloquium series, Naval Research Laboratory, January 19, 2018.
6. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biological Engineering, Illinois Institute of Technology, September 13, 2017.
7. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biochemical Engineering, Rutgers University, March 30, 2017.
8. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemistry and Biochemistry, University of South Carolina, March 7, 2017.
9. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biomolecular Engineering, University of California, Los Angeles, February 17, 2017.

10. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biomolecular Engineering, University of Maryland, December 6, 2016.
11. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biomolecular Engineering, Clemson University, November 3, 2016.
12. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biomolecular Engineering, Rice University, October 26, 2016.
13. “Adding Logic to Complex Protein Functions”, Department of Chemical and Biomolecular Engineering, University of Connecticut, September 8 2016.
14. “Adding Logic to Complex Protein Functions”, Fraunhofer-CMB, May 12, 2016.
15. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical and Biomolecular Engineering, University of Tennessee, October 20, 2015.
16. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical and Biological Engineering, University of Colorado, November 4, 2014.
17. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical Engineering, The City College of New York, September 15, 2014.
18. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical and Biomolecular Engineering, University of Houston, September 12, 2014.
19. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical and Biological Engineering, Northwestern University, May 22, 2014.
20. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical and Biological Engineering, Tufts University, April 27, 2014.
21. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical Engineering, University of Washington, November 25, 2013.
22. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical Engineering, University of Massachusetts Amherst, October 3, 2013.
23. “Improving the Biology of Enzyme Fuel Cells”, Chemical Heritage Foundation, September 16, 2013.
24. “Engineering Synthetic Protein Scaffolds with Modular Functionalities”, Department of Chemical Engineering, Lehigh University, September 11, 2013.
25. “Biomomolecular Tools for Sustainable Energy and Improved Human Health”, Department of Chemical and Biological Engineering, Iowa State University, March 7, 2013.

26. "Engineering Synthetic Protein Scaffolds with Exchangeable Functional Domains", School for Engineering of Matter, Transport and Energy, Arizona State University, February 18, 2013.
27. "Engineering Synthetic Protein Scaffolds with Exchangeable Functional Domains", Department of Chemical, Biochemical and Environmental Engineering, University of Maryland, Baltimore County, December 10, 2012.
28. "Biomolecular Tools for Sustainable Energy and Improved Human Health", The Chemistry-Biology Interface Program, University of Delaware, November 28, 2012.
29. "Artificial Cellulosomes for Enhanced Biomass Processing", Department of Chemistry and Biochemistry, University of Delaware, October 26, 2012.
30. "Biomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical and Biological Engineering, Princeton University, University, September 26, 2012.
31. "A Biomolecular Engineering Approach for Environmental Remediation", DuPont Corporate Remediation Group, May 30, 2012.
32. "Biomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute, May 23, 2012.
33. "Artificial cellulosomes for enhanced biomass processing", 5th Annual Advances in Biomolecular Engineering Symposium, The New York Academy of Sciences, April 27, 2012.
34. "Biomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical and Biomolecular Engineering, Ohio State University, March 1, 2012.
35. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Civil and Environmental Engineering, University of Delaware, February 17, 2012.
36. "Biomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemistry, University of California, Davis, February 14, 2012.
37. "Real-Time Monitoring of Viral Replication and Anti-Viral Drug Discovery by Molecular FRET Probes", Department of Animal and Food Science, University of Delaware, September 26, 2011.
38. "Biomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical and Biological Engineering, University of Buffalo - SUNY, March 23, 2011.

39. "Biomomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical and Biological Engineering, Polytechnic Institute - NYU, March 11, 2011.
40. "Biomomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical Engineering, Columbia University, September 28, 2010.
41. "Real-Time Monitoring of Viral Replication and Anti-Viral Drug Discovery by Molecular Fret Probes", Department of Chemical Engineering and Material Sciences, University of Minnesota, February 16, 2010.
42. "Biomomolecular Tools for Sustainable Energy and Improved Human Health", Department of Chemical Engineering, University of Delaware, February 8, 2010.
43. "Biomomolecular Tools for Sustainable Energy and Improved Human Health", Department of Biochemistry, Cal State Fullerton, October 8, 2009.
44. "Real-Time Monitoring of Viral Replication and Anti-Viral Drug Discovery by Molecular Fret Probes", MedImmune Inc., April 13, 2009.
45. "Biomomolecular Tools for Sustainable Energy and Improved Human Health", Lindsay Lecture Series, Department of Chemical Engineering, Texas A&M University, February 4, 2009.
46. "A Biomolecular Engineering Approach for Environmental Remediation and Sensing", Department of Chemical and Biological Engineering, Tufts University, April 14, 2008.
47. "A Biomolecular Engineering Approach for Environmental Remediation and Sensing", Biological Process Technology Institute, University of Minnesota, March 27, 2008.
48. "Biomolecular Engineering: A New Frontier in Environmental Biotechnology", Center for Environmental Systems Microbiology Distinguished Lecture Series, Georgia Institute of Technology, March 28, 2007.
49. "Environmental Biotechnology: Challenges and Opportunities for Chemical Engineers", Bioengineering Department, University of Maryland, College Park, May 2, 2006
50. "Environmental Biotechnology: Challenges and Opportunities for Chemical Engineers", Department of Chemical and Biological Engineering, Rensselaer Polytechnic Institute, April 20, 2006.
51. "Environmental Biotechnology: Challenges and Opportunities for Chemical Engineers", Department of Chemical Engineering and Materials Science, University of Southern California, April 17, 2006.
52. "Biomolecular Engineering: A New Frontier in Environmental Biotechnology", Department of Civil and Environmental Engineering, Arizona State University, April 4, 2006.

53. "Environmental Biotechnology: Challenges and Opportunities for Chemical Engineers", Department of Chemical Engineering, Penn State University, February 16, 2006.
54. "A Biomolecular Engineering Approach for Environmental Remediation and Sensing", Department of Chemical and Biomolecular Engineering, University of California, Los Angeles, January 20, 2006.
55. "Biomolecular Engineering: A New Frontier in Environmental Biotechnology", Department of Civil and Environmental Engineering, University of California, Los Angeles, November 29, 2005.
56. "A Biomolecular Engineering Approach for Environmental Remediation and Sensing", Department of Chemical Engineering, Texas Tech University, September 9, 2005.
57. "Biomolecular Approaches for Biosensing", The Biotechnology Research Institute, Connam National University, Korea, June 26, 2005.
58. "Engineering Improved Microbes and Enzymes for Biodegradation of Nerve Agents", Korean Society for Microbiology and Biotechnology (KMB) Annual Symposium, Seoul, Korea, June 28, 2005.
59. "A Biomolecular Engineering Approach for Environmental Remediation and Sensing", Department of Chemical and Biological Engineering, Northwestern University, April 28, 2005.
60. "A Biomolecular Engineering Approach for Environmental Biotechnology", Department of Chemical Engineering, Rice University, February 3, 2005.
61. "A Biomolecular Engineering Approach for Environmental Biotechnology", Department of Chemical Engineering, University of Southern California, January 19, 2005.
62. "Biomolecular Approaches for Biosensing", Department of Chemistry, Analytical Chemistry Seminar, University of California, Riverside, May 24, 2004.
63. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Bioengineering, University of Illinois, Urbana-Campaign, February 5, 2004.
64. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Biochemistry, California State University, Fullerton, December 10, 2003.
65. "Nanoscale Biopolymers with Tunable Properties for Improved Decontamination and Recycle of Heavy Metals", EPA Science Forum, Washington D.C., May 7, 2003.
66. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Chemical Engineering, University of Maryland, College Park, April 1, 2003.

67. "Nanoscale Biomaterials for Environmental and Biomedical Applications", Photosynthesis and Biomolecular Nanotechnology Seminar Series, Arizona State University, January 23, 2003.
68. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Chemical Engineering, University of Nevada, Reno, September 27, 2002.
69. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Chemical Engineering, University of Connecticut, September 10, 2002.
70. "A Biomolecular Engineering Approach for Environmental Remediation", Department of Chemical Engineering, John Hopkins University, March 28, 2002.
71. "Engineering Improved Microbes and Enzymes for Bioremediation", Environmental Toxicology Program, University of California, Riverside, March 14, 2001.
72. "Engineering Improved Microbes and Enzymes for Bioremediation", Biological Process Technology Institute, University of Minnesota, October 13, 2000.
73. "Engineering Improved Microbes and Enzymes for Bioremediation", Department of Chemical and Biochemical Engineering and Materials Science, University of California, Irvine, May 26, 2000.
74. "Engineering Improved Microbes and Enzymes for Bioremediation", Department of Civil Engineering, University of Southern California, October 29, 1999.
75. "High Efficiency Biodegradation of Organophosphate Nerve Agents using Novel Immobilized Biocatalysts", NATO Advance Study Institute, Enzymes in Heteroatom Chemistry: Green Solutions for Chemical Problems, Berg en Dal, Netherlands, June 19-30, 1999.
76. "Biodegradation of Organophosphorus Nerve Agents by Surface-Expressed Organophosphorus Hydrolase", NATO Advance Study Institute, Enzymes in Heteroatom Chemistry: Green Solutions for Chemical Problems, Berg en Dal, Netherlands, June 19-30, 1999.
77. "Engineering Improved Microbes and Enzymes for Bioremediation", Department of Biochemistry, California State University, Fullerton, May 18, 1999.
78. "Engineering Improved Microbes and Enzymes for Bioremediation", Department of Chemical Engineering, University of Notre Dame, March 31, 1999.
79. "Molecular Approaches to Environmental Biotechnology", Department of Chemical Engineering, Virginia Tech, June 22, 1998.

80. "Molecular Approaches to Environmental Biotechnology", Department of Chemical Engineering, Penn State University, April 2, 1998.
81. "Molecular Approaches to Environmental Biotechnology", Department of Chemical Engineering, University of Florida, March 30, 1998.
82. "Molecular Approaches to Environmental Biotechnology", Department of Chemical Engineering, North Carolina State University, January 5, 1998.
83. "Chemical Engineering of Cellular Processes", Department of Chemical Engineering, Texas A&M University, November 3, 1997.
84. "Engineering the Translational Apparatus of *E. coli* for Enhanced Recombinant Protein Synthesis During Restricted Growth", Genentech Inc., June 6, 1997.
85. "Improvement in Recombinant Protein Synthesis in Genetically-Engineered *E. coli* During Restricted Growth", Biotechnology Division, National Institute of Standard and Technology, October 28, 1996.
86. "Application of Metabolic Engineering to Bioprocessing and Biodegradation", Department of Chemical Engineering, Washington University, October 14, 1996.
87. "Tuning Biphenyl Dioxygenase for Enhanced PCB Degradation", Office of Naval Research Workshop on Biological Dehalogenation in Marine Sediments, Federation of American Societies for Experimental Biology, Bethesda, May 7, 1996.
88. "Application of Metabolic Engineering to Bioprocessing and Bioremediation", Department of Chemical Engineering, UCLA, March 15, 1996.

TEACHING EXPERIENCE

Instructor for courses in Cell Engineering, Process Control, Mass Transfer, Chemical Engineering Thermodynamics I and II, Mass and Energy Balance, Biochemical Engineering, Undergraduate Laboratory, and Heat Transfer

STUDENT ADVISING

Current Post-Doctoral Students

None

Current Graduate Students (major advisor or co-advisor) at Delaware (11)

Rebecca Chen (Ph.D.), Chemical Engineering, 2012-Present

Ka-Hei Siu (Ph.D.), Chemical Engineering, 2012-Present

Emily Hartzell (Ph.D.), Chemical Engineering, 2014-Present

Andrew Swartz (Ph.D.), Chemical Engineering, 2014-Present
Emily Berckman (Ph.D.), Chemistry and Biochemistry, 2015-Present
Andrew Gaynor (Ph. D.), Chemical Engineering, 2015-Present
Rachel Lieser (Ph.D.), Chemical Engineering, with Prof. M. Sullivan, 2015-Present
Alexander Mitkas (Ph.D.), Chemical Engineering, 2016-Present
Victoria Hunt (Ph.D.), Chemical Engineering, with Prof. K. Lee, 2016-Present
Daniel Yur (Ph.D.), Chemical Engineering, with Prof. M. Sullivan, 2016-Present
Hopen Yang (Ph.D.), Chemical Engineering, 2017-Present

Former Ph.D. Students at UC Riverside (19)

Dr. Aijun Wang (Cal EPA), 2001, Co-advisor: Prof. A. Mulchandani
Dr. Mark Shimazu (Ambrx.), 2002, Co-advisor: Prof. A. Mulchandani
Dr. Catherine Cho (Codexis, Inc.), 2003, Co-advisor: Prof. A. Mulchandani
Dr. Jae-Young Kim (Samsung Research Center, Korea), 2004, Co-advisor: Prof. A. Mulchandani
Prof. Yu Lei (Associate Professor, University of Connecticut), 2004, Co-advisor: Prof. A. Mulchandani
Dr. Kanchan Joshi (NanoMix, Inc.) 2006, Co-advisor: Prof. A. Mulchandani
Dr. Cindy Wu, 2006, (Postdoc, Lawrence Berkeley Lab), Co-advisor: Prof. A. Mulchandani
Dr. U Loi (Anne) Lao (Engineer, Codexis, Inc.), 2007, Co-advisor: Prof. A. Mulchandani
Dr. Yu-Chen Hwang (Specialist, Nikon Instruments Inc.), 2007, Co-advisor: Prof. M.V. Yates
Dr. Mangesh Banger (Advanced Materials), 2008, Co-advisor: Prof. A. Mulchandani and Myung
Dr. Seung Hyun Kang (Research Scientist, LG Life Sciences, Daejeon, Korea), 2008
Dr. Shailendra Singh (Scientist, Merck), 2008
Dr. Joun Lee (Postdoc, UCSB), 2009, Co-advisor: Prof. A. Mulchandani and Myung
Dr. Maxwell Kum, (Engineer, ACON Laboratories, Inc.), 2009, Co-advisor: Prof. A. Mulchandani and Myung
Dr. Hsiao-Yun Yeh (Postdoc, Max Planck Institute), 2010
Dr. Payal Biswas (Scientist, Merck), 2010
Dr. Divya Sivaraman, (Research Scientist, Medhus Bio), 2011
Dr. Shen-Long Tsai (Assistant Professor, NTUST, Taiwan), 2011
Dr. Lakshmi Narasamamba Cella, (Scientist, Merck), 2012

Former Ph.D. Students at University of Delaware (6)

Dr. Fang Liu, (Scientist, Novozymes), 2012
Dr. Miso Park, (Postdoctoral Researcher, City of Hope), 2013
Dr. Daniel Blackstock (Scientist, NIH), 2014
Dr. Qing Sun (Assistant Professor, Texas A&M), 2015
Dr. Heejae Kim (Scientist, Merck), Chemical Engineering, 2016
Dr. Qi Chen, Chemical Engineering, 2017

Former M.S. Students at UC Riverside

Ms. Grisselle Martinez (FDA Lab), M.S. 1999, Co-advisor: Prof. A. Mulchandani
Ms. Oymon Leong (USDA Lab), M.S. 2001, Co-advisor: Prof. M.V. Yates
Mr. Giri Prabhukumar (Krieger and Stewart Consulting), M.S. 2002, Co-advisor: Prof. A. Mulchandani
Mr. Alin Chen (Amgen), M.S. 2006, Co-advisor: Prof. A. Mulchandani

Ms. Nicole McBean (Boston Scientific), M.S. 2006, Co-advisor: Prof. A. Mulchandani
Garima Goyal, (Lawrence Berkeley National Laboratory), M.S. 2010
Garima Chaudhary, (Cobalt Biofuels), M.S. 2011
Chun-Che Tseng, (Dow, Taiwan), M.S., 2010, Co-advisor: Prof. Jianzhong Wu

Former M.S. Students at Delaware

Long Chen, Chemical Engineering, 2015
Lauren Dorse, Chemical Engineering, 2017

Former Post-Doctoral Students (33)

Dr. Neilay Dedhia (Cold Spring Harbor Laboratory), 1995-1996
Dr. Richard D. Richins (New Mexico State University), 1995-1999
Dr. Fredi Bruhlman (Firmenich SA, Switzerland), 1996-1998
Dr. Irina Kaneva, 1996-1998
Dr. S. M. Zarook, 1996-1997
Dr. Nathalie Fortin (post-doc U Bath), 1997-1998
Dr. Weon Bae (Union Biometrica), 1997-2001
Dr. Jan Kostal (R & D System, Inc.), 1999-2003
Dr. Zhaohui Xu (Assistant Professor, Bowling Green State U.), 2000-2002
Dr. Michal Stibor, 2000-2002
Dr. Hanka Stiborova, 2000-2002
Dr. Marek Prouza, 2002-2004
Dr. Sergi Morais, 2001-2003
Dr. Di Gao, (Assistant Professor, U. Pittsburgh), 2004-2005
Dr. Kumaran Ramanathan, (Applied Biosystems) 2004-2005
Dr. Junehyung Kim, (Dong-A University, Korea), 2003-2005
Dr. Lianbin Xu, 2004-2007 (Assoc. Prof., Beijing Univ. of Chem. Technol.)
Dr. Zihui Meng, 2004-2006
Dr. Wonkyu Lee, 2004-2006
Dr. Gabriela Jenikova, 2004-2006 (UC San Deigo)
Dr. Debansu Chaudhuri, 2006-2008
Dr. Zdenek Chodora, 2006-2008
Dr. Chitradurgav Aravinda, 2006-2008
Dr. Jeong Seok Oh, 2007-2008
Dr. Dhammanand J. Shirale. 2008-2009
Dr. Priti Mulchandani, 1996-2010
Dr. Jose Jason Cantera, 2006-2010, Research Scientist at PATH
Dr. Chaokun Li, 2009-2010, Chief of Physiology & Neurobiology, Xinxiang Medical University, China
Dr. Mangesh Banger, 2008-2010, Advanced Materials
Dr. Bhawna Madan, 2010-2012, Assistant Professor at Amity University, India
Dr. Shen-Long Tsai, 2011-2012, Assistant Professor at National Taiwan University Science and Technology
Dr. Riquig Yu, 2014-2014, Assistant Professor, University of Texas, Tyler
Dr. Vince Prince, 2014-2016, Scientist, Janssen Research & Development
Dr. Jeong Eun Hyeon, 2016-2016

Dr. Maryam Raeeszadeh-Sarmazdeh, 2014-2016

SELECTED DEPARTMENT AND UNIVERSITY SERVICES

Delaware

Graduate Advisor, September 2013-2016
Gore Chair Search Committee Chair, 2016-2017
Award Committee Chair, 2017-Present

UCR

Graduate Advisor, September 1998-2004, 2005-2008
Chair, Department Seminar Series, 1997, 1999, 2002, 2004, 2008
Chair, Faculty Search Committee, 1998, 2000, 2002, 2005, 2008
Member, University Planning and Budget Committee, 2004-2008
Member, Graduate Council, 2008-2009
UCR Primary Campus representative to the Research Council of UC BioStar Program

SELECTED PROFESSIONAL ACTIVITIES

Member

American Institute of Chemical Engineers
American Chemical Society
American Society of Microbiology

Reviewer

Journals

Analytical Chemistry
Antonie van Leeuwenhoek
Applied and Environmental Microbiology
Applied Microbiology and Biotechnology
Biocatalysis and Biotransformation
Biodegradation
Biomarcomolecules
Bioprocess Engineering
Bioresources Technology
Biosensors and Bioelectronics
Biotechnology and Bioengineering
Biotechnology Progress
Cell Biochemistry and Biophysics
Clinical Chemistry and Laboratory Medicine
Critical Reviews in Biotechnology
Electrophoresis
Electroanalysis

Environmental Science and Technology
Enzyme and Microbial Technology
FEMS Microbial Letters
Gene
Infection and Immunity
Journal of American Chemical Society
Journal of Applied Microbiology
Journal of Biotechnology
Journal of Chemical Technology and Biotechnology
Journal of Chromatography B
Journal of Hazardous Materials
Journal of Virological Methods
Langmuir
Macromolecules
Metabolic Engineering
Microbiology
Nature Biotechnology
Nature Protocols
Nano Letters
Protein Engineering
Protein Expression and Purification
Sensors & Actuators: B
Soil and Sediment Contamination: an International Journal
Small
Trends in Biotechnology
Water Research

Proposals

NSF
Petroleum Research Fund
USDA
Wellcome Trust
Catholic University, Leuven, Belgium
Florida Sea Grant
North Carolina Biotechnology Center
US Army Medical Research and Materiel Command
International Science and Technology Center
National Aeronautics and Space Administration (NASA) Experimental Program to Stimulate Competitive Research (EPSCoR) Program in South Carolina
Kentucky Science & Engineering Foundation
National Sciences and Engineering Research Council of Canada (NSERC)
National University of Singapore Academic Research Fund

Panelist

NSF Biotechnology Group Proposal Panel, Bioengineering Division,
May 29, 1997

EPA/NSF Panel for Technology for a Sustainable Environmental: Biological
Applications, May, 19, 1998

NSF Biotechnology POWRE/GROUP Proposal Panel, Bioengineering Division, June 8-
9, 2000

UC BioStar Panel, June 2, 2001

NSF Quantitative System Biotechnology Panel, Bioengineering Division, June 7-8, 2001

External Panelist, North Carolina Biotechnology Center, July 2000- 2003

External Panelist, Florida Sea Grant, July 2001

UC BioStar Panel, March 2, 2002

NSF Major Research Instrument Panel, Bioengineering Division, April 3-4, 2002

NSF Quantitative System Biotechnology Panel, Bioengineering Division, May 23-24,
2002

EPA Panel on Environmental Futures Research in Nanoscale Science, Engineering, and
Technology, Oct 22-23, 2002.

UC BioStar Panel, Nov 25, 2002

NSF Major Research Instrument Panel, Bioengineering Division, April 7, 2003

NSF Technology for a Sustainable Environmental Panel, Bioengineering Division, May
8-9, 2003

NSF Major Research Instrument Panel, Bioengineering Division, May 3-4, 2004.

NSF Sensors and Sensor Networks Panel, Bioengineering Division, June 10, 2004.

NSF Biotechnology GROUP Proposal Panel, Bioengineering Division, March 31-April 1,
2005.

NSF Sensors and Sensor Networks Panel, Bioengineering Division, June 7, 2005.

NIH R21 grant study section for biofilm/microbiology and periodontal disease, July 18,
2005

NIH R21 grant study section for biofilm/microbiology and periodontal disease, November 14, 2005

USDA Air, Water, and Soil SBIR Panel, February 9-10, 2006

UC BioStar Panel, March 1, 2006

Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) Review Panel, University of New Hampshire, April 26, 2006

Strategic Environmental Research and Development (SERDP) Program Review Panel for Identification of biomarkers to assess groundwater contaminant degradative potential of a microbial population, May 8, 2006

NSF Career Proposal Panel, Bioengineering Division, November 8-9, 2006

EPA Star Fellowship Panel for Microbiology, March 6-7, 2007

NSF NIRT Panel, Catalysis and Biocatalysis, March 13-14, 2007

NSF Biotechnology/Biochemical Engineering Panel, May 17-18, 2007

NSF Career Proposal Panel, Bioengineering Division, November 13-14, 2007

NSF Biotechnology/Biochemical Engineering Panel, June 9-10, 2008

NIH Special Emphasis Panel for Nanotechnology for Bioremediation, June 11, 2008

NSF Metabolic Biochemistry Panel, October 27-29, 2008

NSF Bioseparation Panel, April 23-24, 2009

NSF Biotechnology/Biochemical Engineering Panel, June 16-17, 2009

NSF Biotechnology/Biochemical Engineering Panel, May 25-26, 2010

DOE's Genomics Sciences Biofuels Panel, December 8 - 10, 2010

NSF Biotechnology/Biochemical Engineering Panel, May 20, 2011

NSF Biotechnology Career Panel, November, 2012

NSF MCB/BBE Career Panel, October, 2013

NSF Catalysis and Biocatalysis Career Panel, December, 2013

NSF Catalysis and Biocatalysis Panel, April, 2014

NSF MCB/BBE Career Panel, September, 2014

NSF Catalysis and Biocatalysis Panel, April, 2015

NSF MCB/BBE Career Panel, September, 2015

NSF MCB/BBE Career Panel, September, 2016

NSF MCB/BBE Career Panel, September, 2017

Program Chair

BIOT Program Chair, 2007 ACS Fall Meeting, Boston

Biochemical and Biomolecular Engineering Conference XX, 2017, Newport Beach,

Session Chair or Co-Chair

Poster Session, Biochemical Technology Division, American Chemical Society 1998 Fall meeting, Boston, MA.

“Recent Developments in Microbial Expression Systems”,
Biochemical Technology Division, American Chemical Society
1998 Fall meeting, Boston, MA.

“Molecular Approaches for Environmental Biotechnology”, Biochemical
Technology Division, American Chemical Society 1999 Spring meeting,
Anaheim, CA.

Poster Session, Engineering Foundation’s Enzyme Engineering XV conference,
October, 1999, Kona, Hawaii.

"Advances in Environmental Biotechnology", American Institute of Chemical Engineers
1999 National Meeting, Dallas, TX.

"Environmental Biotechnology", Biochemical Technology Division, American Chemical
Society 2000 Spring meeting, San Francisco, CA.

"Advances in Biocatalysis", Biochemical Technology Division, American Chemical
Society 2001 Spring meeting, San Diego, CA.

“Environmental Biotechnology”, Engineering Foundation’s Biochemical Engineering XII
Conference, July, 2001, Sonoma, CA.

"Advances in Biocatalysis", American Institute of Chemical Engineers 2001 National Meeting, Reno, NV.

"Nanoscale Sensing Technology: Why and How?", American Chemical Society 2003, Spring meeting, New Orleans, LO.

"BIOT Poster Session", American Chemical Society 2005, Spring meeting, San Deigo, CA.

"Poster Session", Biochemical Engineering XIV Conference, July, 2005, British Colombia, Canada.

"Topical Sensors: Environmental Sensors", American Institute of Chemical Engineers 2005 National Meeting, Cincinnati, OH.

"Topical Sensors: Advances in Biosensors III", American Institute of Chemical Engineers 2005 National Meeting, Cincinnati, OH.

"Foundametnals of Environmental Biotechnology", American Institute of Chemical Engineers 2007 National Meeting, Salt Lake City, UT.

"Fundamentals of Environmental Biotechnology", American Institute of Chemical Engineers 2008 National Meeting, Philiadelphia, PA.

CONFERENCE PRESENTATIONS

1. **Wilfred Chen**, Engineering Biomolecular Scaffolds for Enhanced Biocatalysis, Advanced in Biocatalysis, Invited Keynote, AIChE Annual Meeting, San Francisco, October 2017.
2. Heejae Kim, Andrew Gaynor, and **Wilfred Chen**, Modulating Antibody/Antigen Affinity By Triggered Assembly and Disassembly of an Artificially Split Protein M, AIChE Annual Meeting, San Francisco, October 2017.
3. Emily Hartzell and **Wilfred Chen**, Engineering Hepatitis B Viral-like Particles into Protein Delivery Vehicles, AIChE Annual Meeting, San Francisco, October 2017.
4. Ka-Hei Siu and **Wilfred Chen**, Programmable control of CRISPR-Cas9 systems by engineering sgRNA as toehold-switchable riboregulators, AIChE Annual Meeting, Minneapolis, October 2017.
5. **Wilfred Chen**, Building complex protein functions at the intersection of nanofabrication and synthetic biology, Marvin J. Johnson Award Lecture, ACS Annual Meeting, San Francisco, March 2017.
6. Claire Komives and **Wilfred Chen**, Snake antivenom peptide production using elastin-like peptide tag, ACS Annual Meeting, San Francisco, March 2017.

7. Lauren Dorsey and **Wilfred Chen**, MicroRNA-Triggered dCas9 binding to a molecular beacon for cancer detection, ACS Annual Meeting, San Francisco, March 2017.
8. Ka-Hei Siu and **Wilfred Chen**, Programmable control of CRISPR-Cas9 systems by engineering sgRNA as toehold-switchable riboregulators, ACS Annual Meeting, San Francisco, March 2017.
9. Andrew Gaynor and **Wilfred Chen**, Controlled protein degradation for the conditional survival of cancer suicide enzymes, ACS Annual Meeting, San Francisco, March 2017.
10. Rebecca Chen and **Wilfred Chen**, rodrug activation controlled by Boolean logic-gated nucleic acid strand displacement inside live cancer cells, ACS Annual Meeting, San Francisco, March 2017.
11. Emily Hartzell and **Wilfred Chen**, Bio-Click Chemistry for Modular Modification of Hepatitis B Viral-like-Particles As a Biosensor Platform for Cancer Detection, AICHE Annual Meeting, San Francisco, November 2016.
12. Maryam Raeeszadeh Sarmazdeh, Jacqueline Gonzalez and **Wilfred Chen** Engineering Methanogenesis Pathway of Methanogenic Archaea for Biofuel Production, AICHE Annual Meeting, San Francisco, November 2016.
13. Andrew Swartz and **Wilfred Chen**, Development of an affinity precipitation process using protein nanocages as a non-chromatographic alternative to platform therapeutic antibody purification, ACS Annual Meeting, San Deigo, March 2016.
14. Rebecca Chen and **Wilfred Chen**, Switchable protein sensors and enzyme reactions based on dynamic DNA assembly, ACS Annual Meeting, San Deigo, March 2016.
15. Qing Sun and **Wilfred Chen**, HaloTag mediated artificial cellulosome assembly on DNA template for efficient cellulose hydrolysis, ACS Annual Meeting, San Deigo, March 2016.
16. J. Vincent Price, Long Chen and **Wilfred Chen**, Enzymatic Assembly for Increased Methanol Utilization, ACS Annual Meeting, San Deigo, March 2016.
17. Maryam Raeeszadeh Sarmazdeh and **Wilfred Chen**, Engineering anaerobic methanogenic pathway and methyl-coenzyme M reductase in Methanosarcina acetivorans, ACS Annual Meeting, San Deigo, March 2016.
18. Ka-Hei Siu and **Wilfred Chen**, Synthetic extracellular sensing circuit by intein-mediated reconstitution of yeast mating factor, ACS Annual Meeting, San Deigo, March 2016.
19. **Wilfred Chen**, Adding Logic to Complex Protein Functions, Daniel I.C. Wang Award Lecture, AICHE Annual Meeting, Salt Lake City, November 2015.

20. **Wilfred Chen**, Engineering Nanoscale Protein Scaffolds with Modular Functionalities, Bionanotechnology Plenary Lecture, AIChE Annual Meeting, Salt Lake City, November 2015.
21. J. Vincent Price, Long Chen and **Wilfred Chen**, Enzymatic Assembly for Increased Methanol Utilization, AIChE Annual Meeting, Salt Lake City, November 2015.
22. Ka-Hei Siu and **Wilfred Chen**, Synthetic Extracellular Sensing Circuit By Intein-Mediated Reconstitution of Yeast Mating Facto, AIChE Annual Meeting, Salt Lake City, November 2015.
23. Rebecca Chen and **Wilfred Chen**, DNA Aptamer Switch for Enzymatic Prodrug Activation Against Cancer, AIChE Annual Meeting, Salt Lake City, November 2015.
24. Rebecca Chen and **Wilfred Chen**, DNA strand displacement induced prodrug activation for cancer treatment, ACS Annual Meeting, Denver, March 2015.
25. Ka-Hei Siu and **Wilfred Chen**, Transcriptional activation of yeast by split intein-mediated reconstitution of synthetic peptide signals, ACS Annual Meeting, Denver, March 2015.
26. Daniel Blackstock and **Wilfred Chen**, Organization of Enzyme Proximity Controlled By Strand Displacement, AIChE Annual Meeting, Altanta, November 2014.
27. Qing Sun, Qi Chen, Szu-Wen Wang and **Wilfred Chen**, Post-Translational Modifications of Protein-Nanocages as a Universal Biosensor Platform, AIChE Annual Meeting, Altanta, November 2014.
28. Daniel Blackstock and **Wilfred Chen**, New class of protein labeled molecular beacons, ACS Annual Meeting, Dallas, March 2014.
29. Qi Chen, Qing Sun, Szu-Wen Wang, and **Wilfred Chen**, Engineering 3D protein scaffolds for biocatalysts assembly, ACS Annual Meeting, Dallas, March 2014.
30. Qing Sun, Qi Chen, Szu-Wen Wang, and **Wilfred Chen**, Post-translational modifications of protein-nanocages as a universal biosensor platform, ACS Annual Meeting, Dallas, March 2014.
31. Rebecca P Chen, Miso Park, Vlasta Dudkova, and **Wilfred Chen**, Development of a highly sensitive split protein based whole-cell bioassay to detect estrogenic compounds, ACS Annual Meeting, Dallas, March 2014.
32. Daniel Blackstock and **Wilfred Chen**, New Molecular Probes for mRNA Detection, AIChE Annual Meeting, San Francisco, November 2013.

33. Sneha Srikrishnan, **Wilfred Chen** and Nancy A. Da Silva, Characterization of Modular Designer Xylanosomes for Enhanced Hemicellulose Hydrolysis in Yeast, AICHE Annual Meeting, San Francisco, November 2013.
34. Heejae Kim and **Wilfred Chen**, Engineering Glucose Oxidase to Improve Electron Transport in Enzymatic Fuel Cells, AICHE Annual Meeting, San Francisco, November 2013.
35. Qi Chen, Qing Sun, Szu-Wen Wang, and **Wilfred Chen**, Engineering 3-Dimensional Protein Scaffolds for Biocatalysts Assembly, AICHE Annual Meeting, San Francisco, November 2013.
36. Miso Park, Qing Sun, Fang Liu, Matthew P DeLisa, and **Wilfred Chen**, Positional assembly of enzymes in bacterial outside member vesicles for cascade reactions, ACS Annual Meeting, New Orleans, March 2013.
37. Fang Liu and **Wilfred Chen**, Engineering a high-affinity and recyclable scaffold for protein purification, ACS Annual Meeting, New Orleans, March 2013.
38. Heejae Kim and **Wilfred Chen**, Engineering glucose oxidase to enhance electron transport in enzymatic fuel cells, ACS Annual Meeting, New Orleans, March 2013.
39. Daniel Blackstock and **Wilfred Chen**, New molecular probes for disease-specific mRNA detection, ACS Annual Meeting, New Orleans, March 2013.
40. Rahul Dinesh Sheth, Jia Liu, Mi Jin, Zhengjian Li, **Wilfred Chen**, Steven M Cramer, Purification of monoclonal antibodies using ELP smart biopolymer based affinity precipitation system: HTS and scale-up studies, ACS Annual Meeting, New Orleans, March 2013.
41. Fang Liu, Scott A. Banta and **Wilfred Chen**, Assembly of Multi-Enzyme Cascades Using Synthetic Scaffoldins Displayed On the Yeast Surface, AICHE Annual Meeting, Pittsburg, October 2012.
42. Lakshmi N Cella, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Quantitative Assessment of in Vivo HIV Protease Activity Using Genetically Engineered QD-Based FRET Probes, AICHE Annual Meeting, Pittsburg, October 2012.
43. Qing Sun, Shen-Long Tsai, Bhawna Madan and **Wilfred Chen**, Functional Self-Assembly of Artificial Cellulosomes for Efficient Cellulose Hydrolysis, AICHE Annual Meeting, Pittsburgh, October 2012.
44. Rahul D. Sheth, Bhawna Madan, **Wilfred Chen**, and Steven M. Cramer, Purification of Monoclonal Antibodies by Affinity Precipitation Using Thermally Responsive Elastin-Like Polypeptides(ELPs) Fused to IgG Binding Domains: High Throughput Analysis and Scale up Considerations, AICHE Annual Meeting, Pittsburg, October 2012.

45. Fang Liu and **Wilfred Chen**, Engineering high-Affinity Scaffolds for Protein Purification, ACS Annual Meeting, San Deigo, March 2012.
46. Shen-Long Tsai, Qing Sun, **Wilfred Chen**, Artificial cellulosomes for enhanced biomass processing, ACS Annual Meeting, San Deigo, March 2012.
47. Rahul D Sheth, Bhawna Madan, **Wilfred Chen**, Steven M Cramer, Purification of monoclonal antibodies by affinity precipitation using thermally responsive elastin-like polypeptides(ELPs) fused to IgG binding domains: High-throughput analysis and scale up considerations, ACS Annual Meeting, San Deigo, March 2012.
48. Fang Liu and **Wilfred Chen**, Engineering a Reversible and High-Affinity Scaffold for Protein Purification, AICHE Annual Meeting, Minneapolis, October 2011.
49. Bhawna Madan, Garima Chaudhary, Steven M. Cramer and **Wilfred Chen**, ELP-ZZ Fusions for the Purification of Immunoglobulins by Affinity Precipitation, AICHE Annual Meeting, Minneapolis, October 2011.
50. Garima Chaudhary, Bhawna Madan, Steve Cramer, **Wilfred Chen**, Antibodies purification using ELP-zz domain fusions, ACS Annual Meeting, Anaheim, March 2011.
51. Garima Goyal, Shen-Long Tsai, Bhawna Madan, and **Wilfred Chen**, Engineering synthetic yeast consortia for consolidated bioprocessing, ACS Annual Meeting, Anaheim, March 2011.
52. Rahul D Sheth, Garima Chaudhary, **Wilfred Chen**, and Steven M Cramer, Purification of monoclonal antibodies by affinity precipitation using thermally responsive elastin-like polypeptides (ELPs) fused to IgG binding domains: A high throughput approach, ACS Annual Meeting, Anaheim, March 2011.
53. Shen-Long Tsai and **Wilfred Chen**, Development of Complex Cellulosomes On the Yeast Surface for Cellulosic Ethanol Production, AICHE Annual Meeting, Salt Lake City, November 2010.
54. Miso Park, Chaokun Li, Ashok Mulchandani and **Wilfred Chen**, Screening of Recombinant scfvs as Immuno-Agents for Small Molecule Detection, AICHE Annual Meeting, Salt Lake City, November 2010.
55. Divya Sivaraman, Caroline Rigotto Borges, Ashok Mulchandani, Marylynn Yates and **Wilfred Chen**, Molecular Beacons for Early Diagnostics of Influenza Viruses, AICHE Annual Meeting, Salt Lake City, November 2010.
56. **Wilfred Chen**, Biomolecular Tools for Human Health and Energy, ACS Annual Meeting, San Francisco, March 2010.

57. Michael W.Y. Shen, Dhawal Shah, **Wilfred Chen**, Nancy Da Silva, Engineering of *Saccharomyces cerevisiae* for enhanced arsenate uptake and sequestration, ACS Annual Meeting, San Francisco, March 2010.
58. Miso Park, Lakshmi Cella, **Wilfred Chen**, and Ashok Mulchandani, Single wall carbon nanotubes-based label-free displacement immunosensor for highly sensitive detection of explosives, ACS Annual Meeting, San Francisco, March 2010.
59. Payal Biswas, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Novel QD-based bioassay for screening inhibitors of HIV-1 protease cleavage sites using a genetically programmable protein module, ACS Annual Meeting, San Francisco, March 2010.
60. Shen-Long Tsai and **Wilfred Chen**, Synthetic consortia on the development of cellulosomes for the production of cellulosic ethanol, ACS Annual Meeting, San Francisco, March 2010.
61. Hsiao-Yun Yeh, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Molecular Beacons for Parallel Diagnosis of Infectious Viruses, AICHE Annual Meeting, Nashville, Nov 2009.
62. Payal Biswas, Marylynn V. Yates, and **Wilfred Chen**, Development Genetically Programmable Protein Module for High Throughput Screening of HIV-1 Protease Inhibitors, AICHE Annual Meeting, Nashville, Nov 2009.
63. Fang Liu, Seung Hyun Kang, Nosang Myung, and **Wilfred Chen**, *In Vitro* Enzymatic Synthesis of Phytochelatin-Capped CdS Nanocrystals, AICHE Annual Meeting, Nashville, Nov 2009.
64. Lakshmi Cella, Pablo Sanchez, **Wilfred Chen**, Nosang Myung, and Ashok Mulchandani, Nano aptasensor for protective antigen toxin, ACS Annual Meeting, Washington DC, August 2009.
65. Payal Biswas, Marylynn V. Yates, and **Wilfred Chen**, Development of a QD-based nanobiosensor using a novel genetically programmable protein module, ACS Annual Meeting, Washington DC, August 2009.
66. Shailendra Singh, Seung Hyun Kang, Wonkyu Lee, Ashok Mulchandani and **Wilfred Chen**, Designer bacteria for phytochelatin production and arsenic remediation, ACS Annual Meeting, Washington DC, August 2009.
67. Shen-Long Tsai and **Wilfred Chen**, Functional assembly of minicellulosomes for efficient cellulose hydrolysis by a synthetic yeast consortium, ACS Annual Meeting, Washington DC, August 2009.
68. **Wilfred Chen**, Real-Time Monitoring of Viral Replication and Anti-Viral Drug Discovery by Molecular FRET Probes, AICHE Annual Meeting, Philadelphia, Nov 2008.

69. Divya Sivaraman, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, In Vivo Monitoring of Viral Proteolytic Activity Using Luminescent Quantum Dot FRET-Based Probes, AICHE Annual Meeting, Philadelphia, Nov 2008.
70. Shen-Long Tsai, Jeongseok Oh, Ashok Mulchandani and **Wilfred Chen**, Yeast Surface Display Mini-Cellulosme for Cellulose Hydrolysis, AICHE Annual Meeting, Philadelphia, Nov 2008.
71. Seung Hyun Kang, Divya Sivaraman, Ashok Mulchandani and **Wilfred Chen**, A Novel Genetically Engineered Protein Module for a QD-Based FRET Biosensor, AICHE Annual Meeting, Philadelphia, Nov 2008
72. Shen-Long Tsai, Nancy A. Da Silva, Ashok Mulchandani, and **Wilfred Chen**, Coexpression of *Arabidopsis thaliana* phytochelatin synthase and *Treponema denticola* cystalysin leads to enhanced arsenic accumulation, ACS Fall Meeting, Philadelphia, Aug 2008, Paper BIOT 360.
73. Hsiao-Yun Yeh, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Quantum dot-based nuclease-resistant molecular beacons for visualizing the Coxsackievirus replication in living cells via TAT peptide delivery, ACS Fall Meeting, Philadelphia, Aug 2008, Paper BIOT 259.
74. Shailendra Singh, N.V. Myung, A. Mulchandani, **W. Chen**, Biologically programmed synthesis of hybrid semiconductor nanocrystals, ACS Fall Meeting, Philadelphia, Aug 2008, Paper BIOT 401.
75. **Wilfred Chen**, Metabolic engineering of Escherichia coli for cadmium accumulation and CdS nanocrystals synthesis, ACS Fall Meeting, Philadelphia, Aug 2008, Paper BIOT 236.
76. Seung Hyun Kang, Ashok Mulchandani, and **Wilfred Chen**, Microbial synthesis of CdS nanocrystals in engineered *E. coli*, Biochemical Engineering XV, Quebec City, July, 2007.
77. Hsiao-Yun Yeh, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Nuclease-Resistant Molecular Beacons For Visualizing Coxsackievirus Replication In Living Cells Via Tat Peptide Delivery, AICHE Annual Meeting, Salt Lake City, Nov 2007.
78. Mangesh Ashok Bangar, Carlos M. Hangarter, B. Y. Yoo, **Wilfred Chen**, Ashok Mulchandani, and N. V. Myung, Magnetically Assembled Multi-Segmented Nanowires, AICHE Annual Meeting, Salt Lake City, Nov 2007.
79. S.H. Kang, A. Mulchandani, **W. Chen**, Phytochelatin-mediated synthesis of cadmium chalcogenide semiconductor nanocrystals, ACS Fall Meeting, Boston, Aug 2007, Paper BIOT 388.
80. M. Shen, Shailendra Singh, Dhawal Shah, Wonkyu Lee, **W. Chen**, Nancy A. Da Silva, Metabolic engineering of yeast for enhanced uptake and sequestration of arsenic, ACS Fall Meeting, Boston, Aug 2007, Paper BIOT 171.

81. Shailendra Singh, N.V. Myung, A. Mulchandani, **W. Chen**, Biologically programmed synthesis of hybrid semiconductor nanocrystals, ACS Fall Meeting, Boston, Aug 2007, Paper BIOT 55.
82. U.L. Lao, A. Mulchandani, and **W. Chen**, Simple Conjugation and Purification of Quantum Dot-Antibody Complexes Using a Thermally Responsive Elastin-Protein L Scaffold as Immunofluorescent Agents, SBE's First International Conference on Biomolecular Engineering, Jan, 2007.
83. Jintae Lee, Cao Li, Saw Yen Ow, Martin E. Barrios-Llerena, **Wilfred Chen**, Thomas K. Wood, and Phillip C. Wright, Proteome Changes after Metabolic Engineering to Enhance Aerobic Mineralization of Cis-1,2-Dichloroethylene, AIChE Annual Meeting, San Francisco, Nov 2006.
84. Cory R. O'Neill, Derek Beving, **Wilfred Chen**, and Yushan Yan, Antimicrobial and Hydrophilic Zeolite Coating, AIChE Annual Meeting, San Francisco, Nov 2006.
85. Cory R. O'Neill, Derek Beving, Donald Flores, **Wilfred Chen**, and Yushan Yan, Durability of Hydrophilic and Antimicrobial Zeolite Coatings, AIChE Annual Meeting, San Francisco, Nov 2006.
86. Shailendra Singh, Wonkyu Lee, Dhawal Shah, Nancy A. Da Silva, and **Wilfred Chen**, Designer Yeast for Low-Cost Arsenic Removal, AIChE Annual Meeting, San Francisco, Nov 2006.
87. S.H. Kang, N.V. Myung, A. Mulchandani, **W. Chen**, Biosynthesis of cadmium sulfide semiconductor nanocrystals, AIChE Annual Meeting, San Francisco, Nov 2006.
88. D. Gao, A. Mulchandani, **W. Chen**, Direct monitoring of the conformational change of elastin-like polypeptides upon changing ionic strength using dual polarization interferometry, AIChE Annual Meeting, San Francisco, Nov 2006.
89. G. Jenikova, U.L. Lao, A. Mulchandani, and **W. Chen**, Fabrication of a reversible protein array directly from cell lysate using an elastin-calmodulin fusion, AIChE Annual Meeting, San Francisco, Nov 2006.
90. A. Mulchandani, Z. Meng, and **W. Chen**, Molecularly imprinted polymers for estrogenic pollutant removal, AIChE Annual Meeting, San Francisco, Nov 2006.
91. J. Lee, A.A. Wang, Y. Rheem, B.Y. Yoo, A. Mulchandani, **W. Chen**, N.V. Myung, Control assembly of multi-component nanowires by DNA hybridization, AIChE Annual Meeting, San Francisco, Nov 2006.
92. M. Kum, K.A. Joshi, **W. Chen**, N.V. Myung, and A. Mulchandani, Biomolecule assisted dispersion of carbon nanotubes, AIChE Annual Meeting, San Francisco, Nov 2006.

93. J. Wu, **W. Chen**, N.V. Myung, and A. Mulchandani, Chelator-doped conducting polymer thin films for heavy metal ion detection, AICHE Annual Meeting, San Francisco, Nov 2006.
94. Hsiao-Yun Yeh, Yu-Chen Hwang, Marylynn V. Yates, Ashok Mulchandani, and **Wilfred Chen**, Detection of Hepatitis A Virus Using a Combined Cell-Culture – Molecular Beacon Assay, American Society of Microbiologist Annual Meeting, Toronto, May 2007, Paper Q46.
95. Shailendra Singh, Dhawal Shah, Wonkyu Lee, Nancy A. Da Silva, and **Wilfred Chen**, Enhanced arsenic accumulation and removal by engineered yeast cells expressing ArsR, ACS Fall Meeting, San Francisco, September 2006, Paper BIOT 289.
96. Dhawal Shah, Wonkyu Lee, Shailendra Singh, **Wilfred Chen**, and Nancy A. Da Silva, Metabolic engineering of *Saccharomyces cerevisiae* for enhanced uptake and sequestration of arsenic, ACS Fall Meeting, San Francisco, September 2006, Paper BIOT 34.
97. Gabriela Jenikova, U Loi Lao, Di Gao, Ashok Mulchandani, and **Wilfred Chen**, Fabrication of a reversible protein array directly from cell lysate using an elastin-calmodulin fusion, ACS Fall Meeting, San Francisco, September 2006, Paper BIOT 145.
98. U Loi Lao, Jae-Young Kim, Ashok Mulchandani, and **Wilfred Chen**, Simple bioconjugation and separation of luminescent CdSe-ZnS quantum dots by genetically engineered polyhistidine-tagged ELP-Protein L, A and G fusions as sensitive fluoroagents, ACS Fall Meeting, San Francisco, September 2006, Paper BIOT 28.
99. Seung Hyun Kang, Ashok Mulchandani, and **Wilfred Chen**, Microbial synthesis of CdS nanocrystals in engineered E. coli, ACS Fall Meeting, San Francisco, September 2006, Paper BIOT 33.
100. Wonkyu Lee, Seung hyun Kang, Jae-Young Kim, Ashok Mulchandani, and **Wilfred Chen**, Metabolic engineering for enhanced phytochelatin production and heavy metal accumulation, ACS Fall Meeting, San Francisco, September 2006, Paper BIOT 242.
101. Chandana Karnati, Hongwei Du, **Hai-Feng Ji**, Yuri Lvov, Ashok Mulchandani, Priti Mulchandani, and Wilfred Chen, Organophosphorus hydrolase multilayer modified microcantilevers for organophosphorus detection, ACS Fall Meeting, San Francisco, September 2006, Paper AGRO 216.
102. Katsumi Takayama, Shin-ichiro Suye, Kouichi Kuroda, Mitsuyoshi Ueda, Tetsuya Kitaguchi, Kouta Tsuchiyama, Takeshi Fukuda, **Wilfred Chen**, and Ashok Mulchandani, Surface Display of Organophosphorus Hydrolase on *Saccharomyces cerevisiae*, PACIFICHEM 2005, Honolulu, Hawaii, December, 2006.
103. Cindy H. Wu, Thomas K. Wood, Ashok Mulchandani, and **Wilfred Chen**, Engineering plant-microbe symbiosis for rhizoremediation of heavy metal, PACIFICHEM 2005, Honolulu, Hawaii, December, 2006.

104. Di Gao, Nicole McBean, Jerome S. Schultz, Yushan Yan, Ashok Mulchandani, **Wilfred Chen**, Fabrication of Antibody Arrays Using Thermally Responsive Elastin Fusion Protein, PACIFICHEM 2005, Honolulu, Hawaii, December, 2006.
105. Kanchan A. Joshi, Di Gao, **Wilfred Chen**, Ashok Mulchandani, Bionanotechnology-Based Direct Detection of VX Chemical Warfare Agents, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 551g.
106. Cory R. O'Neill, Derek Beving, Andrew M. P. McDonnell, **Wilfred Chen**, Yushan Yan Hydrophilic and Antimicrobial Zeolite Coatings, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 608e.
107. Lianbin Xu, **Wilfred Chen**, Ashok Mulchandani, Yushan Yan, Reversible Switching of Conducting Polymer Films between Superhydrophobicity and Superhydrophilicity, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 608e.
108. Di Gao, Nicole McBean, Jerome S. Schultz, Ashok Mulchandani, **Wilfred Chen**, Fabrication of Microarray Sensors Using a Temperature-Responsive Elastin Fusion Protein for Simultaneous Detection of Multiple Tumor Markers, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 423d.
109. Adam K. Wanekaya, **Wilfred Chen**, Nosang V. Myung, Ashok Mulchandani, Fet Based Conducting Polymer Coated Carbon Nanotube Bio/Chemical Sensor, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 228d.
110. Aijun A. Wang, Ashok Mulchandani, Nosang Myung, **Wilfred Chen**, Directed Assembly and Fabrication of Metal Nanowires Using Engineered Biopolymers, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 579e.
111. Di Gao, Joseph Cooke, Nicole McBean, Jerome S. Schultz, Ashok Mulchandani, **Wilfred Chen**, Fabrication of Antibody Microarray Sensors Using Thermally Responsive Elastin-Protein a Fusion for Detection of Microbial Pathogens, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 595f.
112. Mangesh Ashok Bangar, Adam Wanekaya, **Wilfred Chen**, Ashok Mulchandani, Nosang V. Myung, Individually Addressable Conducting Polymer Nanowires for Fet Based Label-Free Sensing, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 359g.
113. Wonkyu Lee, Dhawal Shah, Nancy A. DaSilva, **Wilfred Chen**, Metabolic Engineering of Yeast for Bioaccumulation of Arsenic, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 103a.
114. U. Loi Lao, Gabriela Jenikova, Ashok Mulchandani, **Wilfred Chen**, Simple Bioconjugation and Separation of Luminescent Cdse-Zns Quantum Dots by Genetically Engineered Polyhistidine-Tagged Elp-Protein L Fusions as a Sensitive Reagent for Immunoassay, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 526b.

115. Cory R. O'Neill, Derek Beving, Andrew M. P. McDonnell, **Wilfred Chen**, Yushan Yan, Zeolite A Coatings for Use in Condensing Heat Exchangers Onboard Manned Spacecraft, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 142ad.
116. Lianbin Xu, **Wilfred Chen**, Ashok Mulchandani, Yushan Yan, Superhydrophobic Conducting Polymer Films: Synthesis and Reversible Wettability, AICHE Annual Meeting, Cincinnati, Nov 2005, paper 142ab.
117. Cindy H. Wu, Wonkyu Lee, Thomas K. Wood, Ashok Mulchandani, and **Wilfred Chen**, Metabolic engineering of Rhizobacteria for simultaneous removal of TCE and cadmium, Biochemical Engineering XIV, British Columbia, July, 2005.
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