TEXAS STATE VITA

I. Academic/Professional Background

A. Name: M Wells Title: Climate Science Director

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PhD	1999	Texas A&M	Chemistry, Environmental	Dissertation
MS	1987	Texas A&M	Oceanography	Thesis

C. University Experience

2014 – 2018 Associate Professor, variously serving as Head of Department of Environmental Science, Program Director, and Deputy-Director of the Institute for Sustainable Materials and Environment

XJTLU, Suzhou, China

Other teaching experience at Swiss Federal Institute of Technology (Chargée de Cours), University of Alaska Southeast, and short-term delivery/adjunct in US institutions; equivalent UK Fellow of Higher Education

D. Relevant Professional Experience

Approximately 30 years' experience working as an Environmental Practitioner in the areas of Environmental Impact Assessment, Contaminated Land Management, and Environmental Management; former Exemplar Global certified lead auditor, ISO 14001, Environmental Management Systems

E. Other Professional Credentials (licensure, certification, etc.)

II. TEACHING

A. Teaching Honors and Awards:

B. Courses Taught:

Undergraduate –

Chemical Biotechnology • Communication, Business, and the Environment • Dynamic Landscapes • Environmental Chemistry • Environmental and Marine Pollution • Environmental Impact Assessment • Environmental Management • Environmental Science • Final Year Project •

Food Safety and Security • General Chemistry • Global Environmental Issues • Instrumental Analysis • Marine Science • Oceanography • Physical Chemistry • Planet Earth • Research Design and Research Skills • Science for Non-science Majors • Quantitative Analysis • Waste Management • various laboratory courses

Graduate –

Advanced Analysis • Development of Environmental Technology • Nanomaterials • Surface Chemistry • Interfacial Chemistry • Advanced Environmental Science • Contaminated Sites • Artificial Neural Networks Applications

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

Four PhD students, two MS students, numerous undergraduate final year projects

D. Courses Prepared and Curriculum Development:

In prior role as educational Program Director at XJTLU, secured multinational degree-awarding power for BSc, MSc, and PhD degrees in Environmental Science (degrees from University of Liverpool in the UK, and XJTLU in China)

Undergraduate –

Chemical Biotechnology • Communication, Business, and the Environment • Dynamic Landscapes • Environmental Chemistry • Environmental and Marine Pollution • Environmental Impact Assessment • Environmental Management • Environmental Science • Final Year Project • Food Safety and Security • Research Design and Research Skills • Science for Non-science Majors • Waste Management • Laboratory Curriculum Development

Graduate –

Advanced Analysis • Development of Environmental Technology • Nanomaterials • Surface Chemistry • Interfacial Chemistry • Contaminated Sites • Artificial Neural Networks Applications

E. Teaching Grants and Contracts

1. Funded External Teaching Grants and Contracts:

2. Submitted, but not Funded, External Teaching Grants and Contracts:

3. Funded Internal Teaching Grants and Contracts:

4. Submitted, but not Funded, Internal Teaching Grants and Contracts:

F. Other:

G. Teaching Professional Development Activities Attended

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

a. Scholarly Monographs:

b. Textbooks:

c. Edited Books:

d. Chapters in Books:

Development of Environmentally Sustainable Materials
M Wells
Ecological Wisdom Inspired Restoration Engineering, 1-18

Polycyclic aromatic hydrocarbon (PAH) sensitive bacterial biosensors in environmental health
M Wells
Biosensors and Environmental Health, 170

e. Creative Books:

2. Articles:

a. Refereed Journal Articles:

https://scholar.google.com/citations?hl=en&user=lFkUO-0AAAAJ&view_op=list_works&sortby=pubdate

“Potentially Toxic Element”─ Something that Means Everything Means Nothing
X Zhang, D Barceló, RJ Clougherty, B Gao, H Harms, B Tefsen, … M Wells
Environmental Science & Technology 56 (17), 11922-11925

From speciation to toxicity: Using a “Two-in-One” whole-cell bioreporter approach to assess harmful effects of Cd and Pb
B Li, X Zhang, B Tefsen, M Wells
Water Research 217, 118384

A case study comparing lead-response in different bioreporters: What constitutes a good biosensor?
X Zhang, Y Zhu, M Wells
Case Studies in Chemical and Environmental Engineering 5, 100192

Whole-cell biosensors for determination of bioavailable pollutants in soils and sediments: Theory and practice
X Zhang, B Li, DN Schillereff, RC Chiverrell, B Tefsen, M Wells
Science of The Total Environment 811, 152178

Nanobiochar-rhizosphere interactions: Implications for the remediation of heavy-metal contaminated soils
X Zhang, M Wells, N Niazi, N Bolan, S Shaheeng, D Hou, B Gao, H Wang, ... M Wells
Environmental Pollution, 118810

A new perspective of copper-iron effects on bloom-forming algae in a highly impacted environment
B Li, X Zhang, J Deng, Y Cheng, Z Chen, B Qin, B Tefsen, M Wells
Water Research 195, 116889

Advances in freshwater risk assessment: improved accuracy of dissolved organic matter-metal speciation prediction and rapid biological validation
X Zhang, B Li, J Deng, B Qin, M Wells, B Tefsen
Ecotoxicology and Environmental Safety 202, 110848

Quantitative high-throughput approach to chalkophore screening in freshwaters
X Zhang, B Li, J Deng, B Qin, M Wells, B Tefsen
Science of The Total Environment 735, 139476

Regional-scale investigation of dissolved organic matter and lead binding in a large impacted lake with a focus on environmental risk assessment
X Zhang, B Li, J Deng, B Qin, M Wells, B Tefsen
Water Research 172, 115478

Whole-cell bioreporters and risk assessment of environmental pollution: A proof-of-concept study using lead]
X Zhang, B Qin, J Deng, M Wells
Environmental Pollution 229, 902-910

Understanding the effect of host flexibility on the adsorption of CH4, CO2 and SF6 in porous organic cages
S Yang, L Chen, D Holden, R Wang, Y Cheng, M Wells, AI Cooper, L Ding
Zeitschrift für Kristallographie-Crystalline Materials 234 (7-8), 547-555

Data on response of in situ algal phytoplankton assemblages to micronutrient treatment in small-scale mesocosms for a large hypereutrophic lake
X Zhang, B Li, H Xu, M Wells, B Tefsen, B Qin
Data in Brief 24, 103778

Effect of micronutrients on algae in different regions of Taihu, a large, spatially diverse, hypereutrophic lake
X Zhang, B Li, H Xu, M Wells, B Tefsen, B Qin
Water Research 151, 500-514

Arsenic mitigation in paddy soils by using microbial fuel cells
W Gustave, ZF Yuan, R Sekar, HC Chang, J Zhang, M Wells, YX Ren, ...
Environmental Pollution 238, 647-655

Whole-cell bioreporters and risk assessment of environmental pollution: A proof-of-concept study using lead
X Zhang, B Qin, J Deng, M Wells
Environmental Pollution 229, 902-910

Improvement in CH4/CO2 ratio and CH4 yield as related to biomass mix composition during anaerobic co-digestion
TG Poulsen, L Adelard, M Wells
Waste Management 61, 179-187

Toward a quality-controlled and accessible Pitzer model for seawater and related systems
DR Turner, EP Achterberg, CTA Chen, SL Clegg, V Hatje, MT Maldonado, ... M Wells
Frontiers in Marine Science 3, 139

Interpretation of complexometric titration data: An intercomparison of methods for estimating models of trace metal complexation by natural organic ligands
I Pižeta, SG Sander, RJM Hudson, D Omanović, O Baars, KA Barbeau, ... M Wells
Marine Chemistry 173, 3-24

The effect of natural organic ligands on trace metal speciation in San Francisco Bay: Implications for water quality criteria
SG Sander, KN Buck, M Wells
Marine Chemistry 173, 269-281

New approach to analysis of voltammetric ligand titration data improves understanding of metal speciation in natural waters
M Wells, KN Buck, SG Sander
Limnology and Oceanography: Methods 11 (9), 450-465

Numerical approach to speciation and estimation of parameters used in modeling trace metal bioavailability
SG Sander, KA Hunter, H Harms, M Wells
Environmental Science & Technology 45 (15), 6388-6395

Response to Comment on "Unlike PAHs from *Exxon Valdez* Crude Oil, PAHs from Gulf of Alaska Coals are not Readily Bioavailable"
HU Deepthike, R Tecon, GKV Kooten, JR Meer, H Harms, M Wells, ...
Environmental Science & Technology 44 (6), 2212-2213

Unlike PAHs from Exxon Valdez crude oil, PAHs from Gulf of Alaska coals are not readily bioavailable
HU Deepthike, R Tecon, G Kooten, JR Meer, H Harms, M Wells, J Short
Environmental Science & Technology 43 (15), 5864-5870

CdSe quantum dots induce superoxide stress in engineered biosensor bacteria
W Senevirathna, R Kiro, R Rosen, I Popov, S Belkin, M Wells
Nanotoxicology 3 (2), 98-108

Comparison of naphthalene bioavailability determined by whole-cell biosensing and availability determined by extraction with Tenax
S Kohlmeier, M Mancuso, U Deepthike, R Tecon, JR van der Meer, ...
Environmental Pollution 156 (3), 803-808

Use of wikis in chemistry instruction for problem-based learning assignments: an example in instrumental analysis
M Wells, R Clougherty
Journal of Chemical Education 85 (10), 1446

Temperature-sensitive microcapsules with variable optical signatures based on incorporation of quantum dots into a highly biocompatible hydrogel
D Hardison, HU Deepthike, W Senevirathna, T Pathirathne, M Wells
Journal of Materials Chemistry 18 (44), 5368-5375

Artificial neural network study of whole-cell bacterial bioreporter response determined using fluorescence flow cytometry
S Busam, M McNabb, A Wackwitz, W Senevirathna, S Beggah, ...M Wells
Analytical Chemistry 79 (23), 9107-9114

Bioreporters: gfp versus lux revisited and single-cell response
S Kohlmeier, M Mancuso, R Tecon, H Harms, JR van der Meer, M Wells
Biosensors and Bioelectronics 22 (8), 1578-1585

Whole-cell living biosensors—are they ready for environmental application?
H Harms, MC Wells, JR Van der Meer
Applied Microbiology and Biotechnology 70 (3), 273-280

A new green fluorescent protein-based bacterial biosensor for analysing phenanthrene fluxes
R Tecon, M Wells, JR Van Der Meer
Environmental Microbiology 8 (4), 697-708

Advances in optical detection strategies for reporter signal measurements
M Wells
Current opinion in biotechnology 17 (1), 28-33

Response characteristics of arsenic-sensitive bioreporters expressing the gfp reporter gene
M Wells, M Gösch, H Harms, JR van der Meer
Microchimica Acta 151 (3), 209-216

Parallel dual-color fluorescence cross-correlation spectroscopy using diffractive optical elements
M Gösch, H Blom, S Anderegg, K Korn, P Thyberg, M Wells, T Lasser, ...
Journal of Biomedical Optics 10 (5), 054008

Ultrasensitive reporter protein detection in genetically engineered bacteria
M Wells, M Gösch, R Rigler, H Harms, T Lasser, JR van der Meer
Analytical Chemistry 77 (9), 2683-2689

Model polymer release system study of PAH bioaccessibility: the relationship between "rapid" release and bioaccessibility
M Wells, LY Wick, H Harms
Environmental Science & Technology 39 (4), 1055-1063

Perspectives on modeling the release of hydrophobic organic contaminants drawn from model polymer release systems
M Wells, LY Wick, H Harms
Journal of Materials Chemistry 14 (15), 2461-2472

Computing the superexchange electronic factor of electron transfer theory using a grid-based numerical method
MC Wells, RR Lucchese
Journal of Computational Chemistry 21 (14), 1262-1273

Inner-valence photoionization of HCN: An example of the complete breakdown of the quasiparticle picture of photoionization
M Wells, RR Lucchese
Physical Review A 60 (6), 4519

The outer valence photoionization of acetylene
MC Wells, RR Lucchese
The Journal of Chemical Physics 111 (14), 6290-6299

Multidimensional configuration-space models of the electronic factor in electron transfer by superexchange: Implications for models of biological electron transfer
MC Wells, RR Lucchese
The Journal of Physical Chemistry A 103 (36), 7345-7356

The inner valence photoionization of acetylene
M Wells, RR Lucchese
The Journal of Chemical Physics 110 (13), 6365-6380

Atomic and molecular collisions and interactions-Inner-valence photoionization of HCN: An example of the complete breakdown of the quasiparticle picture of photoionization
M Wells, RR Lucchese
Physical Review-Section A-Atomic Molecular and Optical Physics 60 (6), 4519-4531

Molecular Structure, Bonding, Quantum Chemistry, and General Theory-Multidimensional Configuration-Space Models of the Electronic Factor in Electron Transfer by Superexchange

MC Wells, RR Lucchese
Journal of Physical Chemistry A 103 (36), 7345-7356

Gas Phase Dynamics and Structure: Spectroscopy, Molecular Interactions, Scattering, and Photochemistry-The outer valence photolonization of acetylene
MC Wells, RR Lucchese
Journal of Chemical Physics 111 (14), 6290-6299

Gas Phase Dynamics and Structure: Spectroscopy, Molecular Interactions, Scattering, and Photochemistry-The inner valence photoionization of acetylene
M Wells, RR Lucchese
Journal of Chemical Physics 110 (13), 6365-6380

Interactions between organized, surface-confined monolayers and vapor-phase probe molecules. 10. Preparation and properties of chemically sensitive dendrimer surfaces
M Wells, RM Crooks
Journal of the American Chemical Society 118 (16), 3988-3989

Preparation of hyperbranched polymer films grafted on self-assembled monolayers
Y Zhou, ML Bruening, DE Bergbreiter, RM Crooks, M Wells
Journal of the American Chemical Society 118 (15), 3773-3774

Interactions between organized, surface-confined monolayers and vapor-phase probe molecules. 9. Structure/reactivity relationship between three surface-confined isomers of …
M Wells, DL Dermody, HC Yang, T Kim, RM Crooks, AJ Ricco
Langmuir 12 (8), 1989-1996

Distribution of metals in a polluted aquifer: A comparison of aquifer suspended material to fine sediments of the adjacent environment
M Magaritz, AJ Amiel, D Ronen, MC Wells
Journal of Contaminant Hydrology 5 (4), 333-347

Determination of in situ metal partitioning between particulate matter and ground water
MC Wells, M Magaritz, AJ Amiel, B Rophe, D Ronen
Naturwissenschaften 76 (12), 568-570

Application of a multi-layer sampler based on the dialysis cell technique for the study of trace metals in groundwater
M Magaritz, M Wells, AJ Amiel, D Ronen
Applied Geochemistry 4 (6), 617-624

Iridium in marine organisms
MC Wells, PN Boothe, BJ Presley
Geochimica et Cosmochimica Acta 52 (6), 1737-1739

Cyclopropylmethyl derivatives of the transition metals. Insertion reactions and ring openings with formation of. eta. 3-crotyl and. sigma.,. pi.-acyl complexes catalyzed by …
KH Pannell, RN Kapoor, M Wells, T Giasolli, L Parkanyi
Organometallics 6 (3), 663-667

b. Non-refereed Articles:

3. Conference Proceedings:

a. Refereed Conference Proceedings:

b. Non-refereed:

4. Abstracts:

5. Reports:

6. Book Reviews:

7. Essays:

8. Poems:

9. Short Stories:

10. Other Works in Print:

B. Works Not in Print:

1. Papers Presented at Professional Meetings:

2. Invited Talks, Lectures, and Presentations:

3. Consultancies:

4. Workshops:

5. Other Works not in Print:

a. Works "submitted" or "under review":

b. Works "in progress":

c. Other Works Not in Print:

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

2. Submitted, but not Funded, External Grants and Contracts:

3. Funded Internal Grants and Contracts:

4. Submitted, but not Funded, Internal Grants and Contracts:

D. Scholarly / Creative Fellowships, Awards, Honors:

Invited member, International Science Council Working Group, 2015 – 2018

Erwin Schrödinger Prize for excellence in interdisciplinary applied science 2010 (http://www.scoop.co.nz/stories/SC1009/S00015/kiwi-wins-top-international-science-prize.htm)

United States Environmental Protection Agency STAR (Science to Achieve Results) Fellow – competitive award (< 4% success rate)

Ph.D. studies – Phi Kappa Phi (scored 4.0 of 4.0, top 1% of class)

Patricia Roberts Harris Research Fellowship Award

E. Scholarly / Creative Professional Development Activities Attended:

F. Media Recognition:

IV. SERVICE

A. Institutional

1. University:

2. College:

3. Department/School:

B. Professional:

C. Community:

D. Organization Memberships:

E. Service Honors and Awards:

F. Service Grants and Contracts:

1. Funded External Service Grants and Contracts:

2. Submitted, but not Funded, External Service Grants and Contracts:

3. Funded Internal Service Grants and Contracts:

4. Submitted, but not Funded, Internal Service Grants and Contracts:

G. Service Professional Development Activities Attended: