

Fei, Qiang

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Career Path

2016-Current	Professor	School of Chemical Engineering and Technology, Xi'an Jiaotong University (XJTU)
2013-2016	Staff Engineer III	The National Bioenergy Center (NBC), National Renewable Energy Laboratory (NREL)
2011-2013	Postdoc	Sinskey's Lab, Massachusetts Institute of Technology (MIT)

Education

2007-2011	Ph.D.	Biochemical Eng., Korea Advanced Institute of Science and Technology (KAIST), Korea
2003-2006	M.S.	Biochemical Eng., Northwest University, China
1999-2003	B.S.	Environmental Eng., Shenyang University, China

Research Interests

- Application of advanced genetic tools and methods for the construction of recombinant microorganisms to enhance the carbon conversion efficiency and the carbon flux toward desired products.
- Development of the bioconversion platform, bioprocess, and bioreactor for the production of renewable biofuels, sustainable chemicals, green materials, and high-value bioproducts using low-cost biomass as the carbon source, such as lignocellulosic biomass, municipal food wastes, biogas, syngas, flaring gas, CO₂, and municipal and industrial wastewater
- Use of AspenPlus and SuperPro design software for techno-economic analysis (TEA) in terms of conceptual process design and simulation, process integration and intensification, supply chain simulation and optimization, and life cycle analysis (LCA).

Scientific Activity

SCI Journal Reviewer	<i>Energy & Environmental Science</i> (IF25.4); <i>Journal of Materials Chemistry A</i> (IF8.26); <i>Nanoscale</i> (IF7.76); <i>Biotechnology for Biofuel</i> (IF6.44); <i>Energy</i> (IF4.29); <i>RSC Advances</i> (IF3.28); <i>PLoS One</i> (IF3.05); <i>Molecular BioSystems</i> (IF2.82); <i>Food & Function</i> (IF2.68); <i>Process Biochemistry</i> (IF2.52); <i>Environmental Technology</i> (IF1.76); <i>Korean Journal of Chemical Eng</i> (IF1.408),etc.
Grant Reviewer	US Department of Energy (2012)
Conference Duty	Poster Chair of 11 th Recent Advances in Fermentation Technology (RAFT), Society for Industrial Microbiology & Biotechnology (SIMB), Nov 2015, Clear water, FL, USA

Book Chapter

- D. Humbird, **Qiang Fei**. 2016. Chapter 20: Scale-up Considerations for Biofuels. In *Biotechnologies for Biofuel Production and Optimization*. Edited by Carrie Eckert and Cong Trinh. Pg 513-537. Elsevier. New York, US.
- **Qiang Fei**, PT. Pienkos. Chapter: Bioconversion of Methane for Value Added Products. In *Extremophilic Bioprocessing of Lignocellulosic Feedstocks to Biofuels, Value-Added Products, and Usable Power Biotechnologies for Biofuel Production and Optimization*. Edited by Rajesh K. Sani. Springer. Heidelberg, Germany.

Selected Publication (first or corresponding author)

- **Qiang Fei***, *et al.* 2016. Enhanced lipid production by *Rhodospiridium toruloides* with different fed-batch feeding strategies using lignocellulosic hydrolysate as the sole carbon source. *Biotechnol for Biofuels*. 9: 130. (IF 6.444)
- S. Yang[#], **Qiang Fei**[#], *et al.* 2016. *Zymomonas mobilis* as a Model System for Production of Biofuels. *Microbial Biotechnol*, accepted. (IF 3.991)
- **Qiang Fei**, *et al.* 2015. High-cell-density cultivation of an engineered *Rhodococcus opacus* strain for lipid production via co-fermentation of glucose and xylose. *Process Biochem*, 50: 500. (IF 2.529)
- **Qiang Fei**, *et al.* 2014. Bioconversion of natural gas to liquid fuel: opportunities and challenges. *Biotechnol Adv*, 32: 596. (IF 9.848)
- **Qiang Fei***, *et al.* 2014. Lipid production by microalgae *Chlorella protothecoides* with volatile fatty acids (VFAs) as carbon sources in heterotrophic cultivation and its economic assessment. *Bioprocess Biosyst Eng*, 38:691. (IF 1.901)
- GW Park[#], **Qiang Fei**[#], *et al.* 2014. Volatile fatty acids derived from waste organics provide an economical carbon source for microbial lipids/biodiesel production.

Biotechnol Journal, 9: 1536. (IF 3.781)

- **Qiang Fei**, *et al.* 2013. Production of branched-chain alcohols by recombinant *Ralstonia eutropha* in fed-batch cultivation. *Biomass Bioeng*, 56: 334. (IF 3.249)
- L. Shang^{*#}, **Qiang Fei**[#], *et al.* 2012. Thermal properties and biodegradability studies of Poly (3-hydroxybutyrate-co -3-hydroxyvalerate). *J Polymer Environ*, 20: 123. (IF 1.969)
- **Qiang Fei**, *et al.* 2011. The effect of volatile fatty acids as a sole carbon source on lipid accumulation by *Cryptococcus albidus* for biodiesel production. *Bioresour Technol*, 102: 2695. (IF 4.917)
- **Qiang Fei**, *et al.* 2011. Exploring low-cost carbon sources for microbial lipids production by fed-batch cultivation of *Cryptococcus albidus*. *Biotechnol Bioprocess Eng*, 16: 482. (IF 1.211)