

# Fei Fan

Aerospace and Mechanical Engineering  
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**ResearchGate:**

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## EDUCATION

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- 2013-2018 Ph.D. in Medicinal Chemistry, School of Medicine and Pharmacy, Ocean University of China, Qingdao, China.
  - ✓ Dissertation: Design and synthesis of marine derived polysaccharide mimetics containing sulfated fucose and evaluation of their bioactivities
  - ✓ Supervisors: *Guangli Yu* (Professor)  
*Chao Cai* (Associate Professor)
- 2009-2013 B.S. in Pharmaceutical Engineering, School of Chemistry and Chemical Engineering, Wuhan University of Technology, Wuhan, China.
  - ✓ Thesis: Study on the MBH reaction of benzaldehyde with  $\alpha,\beta$ -unsaturated compounds
  - ✓ Supervisors: *Hua Zheng* (Professor)

## RESEARCH EXPERIENCES

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- 2013-2018 **PhD Research**, *Ocean University of China*, Qingdao, China.
  - ✓ Developed the microwave-assisted ring-opening metathesis polymerization (ROMP) in an emulsion system for marine derived polysaccharide mimetics synthesis.
  - ✓ Synthesis of fucoidan mimetics by ROMP for anti-influenza A virus (IAV) activity study.
  - ✓ Bioinspired synthesis and structure-activity relationship study of fucosylated chondroitin sulfates (fCS) as an anticoagulant agent.
  - ✓ Extending the application of ROMP to synthesis of hyperbranched glycopolymers and fucose-phenylboronic acid (PBA) copolymers.
- 2009-2013 **Undergraduate Research**, *Wuhan University of Technology*, Wuhan, China.
  - ✓ Working as a teammate of project on construction and evaluation of nitrogen mustards controlled-release targeted nano-drug delivery system for chronic lymphocytic leukemia, *Funded by Undergraduate Students' Innovation Training Program of Wuhan University of Technology*.
  - ✓ Assisted with lab's research project on developing novel chitosan type anti-bacterial agents.

## HONORS & AWARDS

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- The 11th International Symposium on Glycosyltransferases (*GlycoT*) Excellent Poster Award (2018)
- The 13th Chinese Annual Symposium on Marine Drugs & 2017 International Marine Drugs Symposium Excellent Poster Award (2017)
- National Scholarship for Doctoral Students, China (2017)
- The First Prize of Graduate Scholarship, Ocean University of China (2017)
- The Second Prize of Graduate Scholarship, Ocean University of China (2016)
- The Second Prize of Graduate Scholarship, Ocean University of China (2015)
- Outstanding Undergraduate Student, Wuhan University of Technology (2013)
- National Motivational Scholarship, Wuhan University of Technology (2011)

## PEER-REVIEWED PUBLICATIONS

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- Wang, L.\*; **Fan, F.\***; Wu, H.; Gao, L.; Zhang, P.; Sun, T.; Li, J.; Yu, G.; Cai, C. Effect of anomeric configuration on stereocontrolled  $\alpha$ -glycosylation of L-fucose. *Synlett* **2018**, 29, 2701-2706. (\*Contributed Equally)
- **Fan, F.**; Cai, C.; Wang, W.; Gao, L.; Li, J.; Li, J.; Gu, F.; Sun, T.; Li, J.; Li, C.; Yu, G. Synthesis of fucoidan-mimetic glycopolymers with well-defined sulfation patterns via emulsion ring-opening metathesis polymerization. *ACS Macro. Lett.* **2018**, 7, 330-335. (IF 6.185)
- **Fan, F.**; Cai, C.; Gao, L.; Li, J.; Zhang, P.; Li, G.; Li, C.; Yu, G. Microwave-assisted synthesis of glycopolymers by ring-opening metathesis polymerization (ROMP) in an emulsion system. *Polym. Chem.* **2017**, 8, 6709-6719. (IF 5.375, Front Cover)
- Shan, X.; Liu, X.; Hao, J.; Cai, C.; **Fan, F.**; Dun, Y.; Zhao, X.; Liu, X.; Li, C.; Yu, G. *In vitro* and *in vivo* hypoglycemic effects of brown algal fucoidans. *Int. J. Biol. Macromol.* **2016**, 82, 249-255.
- Liu, X.; Liu, Y.; Hao, J.; Zhao, X.; Lang, Y.; **Fan, F.**; Cai, C.; Li, G.; Zhang, L.; Yu, G. *In vivo* anti-cancer mechanism of low-molecular-weight fucosylated chondroitin sulfate (LFCS) from sea cucumber *Cucumaria frondosa*. *Molecules* **2016**, 21, 625.
- Zhao, X.; **Fan, F.**; Zhao, X.; Lang, Y.; Liu, X.; Cai, C.; Li, G.; Yu, G. Isolation, purification and structural identification of glycosaminoglycans from porcine lung. *Chin. J. Pharm. Anal.* **2016**, 36, 587-593. (in Chinese)
- Shan, X.; Yan, L.; **Fan, F.**; Lü, Y.; Zhu, H.; Li, C.; Nadezda, U.; Nikolay, E. N.; Yu, G. Effects of different extraction methods on the physicochemical properties of fucoidan. *Chin. J. Mar. Drug.* **2015**, 34, 7-12. (in Chinese)
- Ding, L.; Shan, X.; Hao, J.; Lü, Y.; **Fan, F.**; Zhao, X.; Cai, C.; Yu, G. The  $\alpha$ -glucosidase inhibitory effects of polysaccharides from *Turbinaria conoides* and *Turbinaria ornate*. *Chin. J. Mar. Drug.* **2016**, 35, 81-86. (in Chinese)

## Book Chapter

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- Cai, C.; Li, J.; **Fan, F.**; Li, G.; Li, C.; Yu, G. Synthesis of marine polysaccharides/oligosaccharides and their derivatives. Chapter 9, *Synthetic Glycomes*, Editor: Peng George Wang, Wanyi Guan & Lei Li (RSC Chemical Biology Book Series), 2018.

## Patent

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- Cai, C.; Yu, G.; **Fan, F.**; Li, G. Preparation of polynorbornene based glycopolymers and application in fucoidan mimetics synthesis. CN108530570A. (2018, in Chinese)

## PARTICIPATE IN/SUBMIT PAPER TO ACADEMIC CONFERENCES

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- The 5th Symposium on Innovative Polymers for Controlled Delivery (*SIPCD*), 2018, Suzhou, China.
- The 11th International Symposium on Glycosyltransferases (*GlycoT*), 2018, Qingdao, China. (*Three Minutes Oral Presentation, in English*)
- Annual Academic Conference of National Laboratory for Marine Science and Technology, 2017, Qingdao, China. (*Oral Presentation in Marine Drugs Doctoral Forum, in Chinese*)
- The 13th Chinese Annual Symposium on Marine Drugs & 2017 International Marine Drugs Symposium, 2017, Qingdao, China. (*Poster Presentation*)
- The 2nd Youth Symposium on Carbohydrate Synthesis Chemistry, 2017, Jinan China. (*Poster Presentation*)
- The 8th Asian Community of Glycoscience and Glycotechnology Conference, (*ACGG*), 2016, Wuxi, China.
- Carbohydrate Synthesis Chemistry (Youth) Summit Forum, 2015, Nanchang, China.