

# YAN PENGYU

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## EDUCATION BACKGROUND

<b>Virginia Polytechnic Institute and State University</b> Master of Science, Major in Environmental Engineering Overall GPA 3.5/4.0	Blacksburg, VA 01/2016-01/2018
<b>Tianjin University</b> Bachelor of Science, Major in Environmental Science Overall GPA 3.1/4.0	Tianjin, China 09/2011-06/2015

## RESEARCH EXPERIENCE

### Cathode Modification/Characterization of Microbial Fuel Cells (MFC)

- Nankai University** 06/2014-07/2015
- Reviewed literature on the topic of MFC and categorized papers using Endnote for group members' convenience; took part in group meeting discussions and contributed research ideas;
  - Set up the single-compartment MFC; managed to stabilize all biological parameters for consistent measurements;
  - Conducted Electrochemical measurements and was capable of using apparatus including voltammetry, impedance spectroscopy and potentiostat;
  - Collected, interpreted, analyzed and compiled data; prepared records and preliminary reports for group discussions;
  - Participated in paper writing using LaTeX and listed as the 2<sup>nd</sup> author of the paper published on *Bioresource Technology*;
  - Independently initiated the project by taking advantage of the ideas during the last project; utilized copper-based catalyst to replace Pt in traditional MFC application.

- Cathode Modification of MFC—Tianjin University** 12/2014-06/2015
- Undergraduate thesis topic, optimized cathode materials of MFC and provided possibilities for large-scale application;
  - Trained new group members in Dr. Liu's team with basic lab procedures.

- Dual functional cathodes applied in MEC and MFC—Virginia Tech** 09/2016-01/2018
- Cooperated with a research group from the Department of Chemistry coating copper and copper oxide on carbon cloth using the electrodeposition method.
  - Pre-tested the cathodes using electrochemical methods, including LSV, EIS, and XPS tests.
  - Applied the new cathodes in MFCs and MECs and monitored the current generation and hydrogen gas production by making polarization curve and calculating the reactors' efficiencies.

## PUBLICATIONS

--Zhang, X., Yan, P.Y., Liu, Z.Q., Pu, L.T., Li, K.X., 2015. N-type Cu<sub>2</sub>O doped activated carbon as catalyst for improving power generation of air cathode microbial fuel cells. *Biores. Technol.* 187, 299–304.

## STANDARDIZED TESTS

TOEFL:96	Reading: <b>25</b> , Listening: <b>24</b> , Speaking: <b>24</b> , Writing: <b>23</b>	07/2015
GRE:	Verbal: <b>159</b> , Quantitative: <b>166</b> , Analytical Writing: <b>3.0</b>	01/2022