

# Axel Fayet

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Graduate Student

DOB: November, 8<sup>th</sup> 1990 (Lyon, France)

## Research Topics

- Valorization of lignocellulosic biomass using white biotechnologies and process engineering

## Present & previous positions

Jan. 2015 - Present - **Graduate student**, *Production of bacterial fermentation substrates through the detoxification of pre-treated lignocellulosic biomass using membrane filtration processes*, Chaire Agro-Biotechnologies Industrielles (ABI), Reims, France.

March 2014 - August 2014 - **Internship**, Narbonne INRA, France.

*Study of microalgae growth kinetics on dark fermentation digestate*

- Heterotrophic cultures of microalgae in pure conditions, or mixed with facultative anaerobic bacteria
- Characterization of growth kinetics using modeling and microbiological analysis (qPCR, SSCP, ...) and physicochemical (HPLC, GC-FID)

June 2013 - August 2013 - **Internship**, Grignon INRA, France.

*Downscaling of an industrial process of sulfur compounds production through fermentation of *Saccharomyces cerevisiae**

- Realization of nine fermentations
- Implementation of a standardized monitoring tools and automation of the regulation of some fermentation parameters

## Education

2015 - Present - **PhD student**, UMR GENIAL, Chaire Agro-Biotechnologies Industrielles (ABI), Reims, France.

2011 - 2014 - **Engineer Diploma (MSc. equivalent)**, AgroParisTech engineering school (Paris Institute for life, food and environmental sciences), specialization in biotechnologies and process engineering, Paris, France.

2008 - 2011 - **Preparatory class for the grandes écoles**, Lycée Chaptal, Paris, France.

2008 - **B.Sc. with honors**, Lycée A. Kastler, Cergy, France.

## Scientific production

*Summary:*

- 1 publication submitted
- 2 oral communications

## Publications

- 2015 Turon V.; Trably, E.; Fayet A.; Fouilland E. and Steyer J-P., *Raw dark fermentation effluent to support heterotrophic microalgae growth: microalgae outcompete successfully bacteria for acetate*, Submitted.

## Oral Communication

- 2016 **Production of fermentescible substrate from pretreated lignocellulosic biomass**, JJCC, 20<sup>th</sup> - 21<sup>th</sup> January, Fayet A.; Teixeira A.; Clement T.; Bouix M. and Lameloise M-L..
- 2014 **Successful heterotrophic microalgae growth on raw fermentation effluents**, ICAB, 27<sup>th</sup> - 29<sup>th</sup> August, Turon V.; Trably, E.; Fayet A.; Fouilland E. and Steyer J-P..

## Languages

- French **Native Language**  
English **Fluent**  
Chinese **Beginner**

## Computing Skills

### **Programming languages**

-Python, C/C++, Java

### **Softwares**

-LaTeX, Inkscape, Blender 3D

### **Notions**

-JavaScript, HTML, XML, Arduino (microelectronic)