

# Adrien Saurety

MASTER 2 STUDENT

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## Summary

I am a 23 years old student at the ENS de Lyon. I like all scientific subject areas. That's why, after having completed a Bachelor Degree in Earth Science I completed a Bachelor in Chemistry to acquire further skills in chemistry and physics. I am currently a masters student and I start a PhD on computational mineralogy in september.

## Education

### Lycée Blaise Pascal

CLASSE PRÉPARATOIRE BCPST

Clermont-Ferrand, France

2016-2018

- Undergraduate courses to prepare nationwide competitive exams in sciences : Biology, Chemistry, Physic and Geology.

### ENS de Lyon

BSC DEGREE IN GEOLOGY

Lyon, France

2018-2019

- General geology and specialization in geophysics

### ENS de Lyon

BSC DEGREE IN CHEMISTRY

Lyon, France

2019-2020

- General physic and chemistry and specialization in theoretical chemistry

### ENS de Lyon

MSC IN COMPUTATIONAL PHYSICS AND CHEMISTRY

Lyon, France

2020-Today

- M1 : M1 Chemistry course program of the ENS, mostly specialized in condensate matter physic and theoretical chemistry
- M2 : "Computational Physics and Chemistry" course program of the ENS' Master in chemistry, mostly specialized in condensate matter physic, theoretical chemistry and numerical modelling

## Research Experience

### LGL-TPE

MODELS OF THE PROTOLUNAR DISK

Lyon, France

January 2019

- With Stephane Labrosse we used the python's library *Dedalus* to make models of the convection movement in the protolunar disk. We studied the effect of the rotation on the shape of convection cells.

### ISTerre

USING MACHINE LEARNING TO ANALYSE MAGNETO-HYDRODYNAMIC EXPERIMENTAL DATA

Grenoble, France

June-July 2019

- I worked with Henri-Claude Nataf about his experimental data and we tried to use an Artificial Neural Network to predict missed data.

### LGL-TPE

CALCUL THE FRICTION ENERGY BETWEEN TALC'S SHEET BY DFT

Lyon, France

June-July 2020

- I worked with Razvan Caracas with the software ABINIT to make DFT computation on talc's sheet.

### UCL

AN AB INITIO STUDY OF POSSIBLE PRE-MELTING BEHAVIOUR IN MAGNESIUM

London, England

May-July 2021

- I worked with Lidunka Vočadlo with the software VASP to study the pre-melting of the magnesium under zero pressure and various temperature.

### CEED

SELF-DIFFUSION OF NOBLE GASES IN PYROLITE MELTS

Oslo, Norway

February-July 2022

- I am working with Razvan Caracas to compute the diffusivity of noble gases in melted pyrolite at several Pressure-Temperature conditions. We use the software VASP to get inedit and precise diffusion coefficient to better constrain the Earth formation's models.

## Skills

<b>Software</b>	VASP, Abinit, Avogadro, Gaussian, GROMAC, Docker, Git, CP2K
<b>Programming</b>	Bash, Python, LaTeX, C++, C, Fortran, Matlab
<b>Languages</b>	French (Native), English (C1), Spanish (B1), Russian (A1)
<b>Other skills</b>	Boat licence, driving licence, "Initiateur Alpinisme FFCAM" level 1