

Yilin YE

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Education

École Normale Supérieure (ENS) - Université Paris Sciences et Lettres (PSL) Paris, France
Master II in Physics. Soft matter and Biophysics track, ICFP Sept. 2022 - Jun. 2023
Courses: Fluid & Non-linear Physics, Statistical Field Theory, Soft Matter Physics,
Advanced Statistical Physics, Computational & Data-driven Physics, etc.
Master I in Chemistry. Semestre 1: 14.70/20, Semestre 2: 16.44/20 Sept. 2021 - Jun. 2022
Suspension for COVID-19. Sept. 2020 - Jun. 2021
Diplôme de l'ENS. Étudiant Normalien (Sélection Internationale) Sept. 2019 - Jun. 2023
Xiamen University Xiamen, China
Bachelor in Chemistry. GPA: 3.86/4, Outstanding Graduate Sept. 2015 - Jun. 2019

Internships

Brownian Motion near a Soft Surface (M1S2) Bordeaux, France
Supervisor | Thomas SALEZ, Laboratoire Ondes et Matière d'Aquitaine (LOMA) Feb. 2022 - Jul. 2022
> Theoretical analyses of non-linear coupled equations for cylindrical particle's movement;
> Calculation towards effective friction matrix and modified fluctuation-dissipation relation;
> Numerical simulations for multidimensional Brownian dynamics;
Gold nanoparticle influence on SPC/E water structure and dynamics Paris, France
Course-based project at ENS, Collaboration with 2 others Oct. 2021 - Nov. 2021
> Gold nanoparticles in SPC/E water with coordinates generated by LAMMPS;
> Probability correlation function towards residence times of water in the first solvation shell;
Study of $\eta^{(\prime)} \rightarrow \pi^+ \pi^- \gamma^{(*)}$ Decays by Effective Field Theory Changsha, China
Supervisor | Lingyun DAI, Hunan University Mar. 2021 - Aug. 2021
> Decay rate and form factor calculations without or with *FeynCalc@Mathematica*;
> Independent programme development with *Fortran* for numerical multivariate fittings;
> Evaluating hadronic light-by-light (HLbL) scattering contributing to $(g-2)_\mu$ anomaly;
Simulation of Vibrational ICD on Model Systems with Reduced Dimensions (L3S2) Jun. 2020 - Jul. 2020
Supervisor | Jérémie CAILLAT, Laboratoire de Chimie Physique-Matière et Rayonnement (LCPMR)
Remote for COVID-19
> Time-dependent Schrödinger equations solved by Crank-Nicolson method & Thomas algorithm;
> Vibrational intermolecular coulombic decay (vib-ICD) process (HF + Li⁻) simulations with Fano model;
From Molecular Simulation to Machine Learning (Discovery week) Paris, France
Supervisor | Rodolphe VUILLEUMIER, ENS Feb. 2020
> Energy calculations & IR spectroscopy simulations with *Orac*;
> Lennard-Jones potential fitting: linear polynomial regression & LASSO regularization & neural network

Conference

Journées de la Matière Condensée (MC24: Simulation des colloïdes) Lyon, France
Oral: Brownian motion near a soft surface 26 Aug. 2022

Researches

- Research towards Total Synthesis of Atkamine** (Undergraduate thesis) Xiamen, China
 Supervisor | Yandong ZHANG, Xiamen University Jan. 2018 - May 2019
 • Zhang, F.; Niu, Y.; Hong, D.; Ye, Y.; Hua, Y.; Ding, S.; Zhang, Y. (2021) *Chinese Chemical Letters*, 32(2), 668-671. doi: 10.1016/j.ccl.2020.06.008
- Research towards Total Synthesis of Phainanoid A** (Summer research) Chicago, USA
 Supervisor | Guangbin DONG, University of Chicago Jul. 2018 - Sept. 2018
- Research towards Total Synthesis of (-)-Actinophyllic Acid** Xiamen, China
 Supervisor | Yandong ZHANG, Xiamen University Jul. 2016 - Jan. 2018
 • Li, J.; Ye, Y.; Zhang, Y. (2018). *Organic Chemistry Frontiers*, 5(5), 864-892. doi: 10.1039/c7qo01077j

Competitions

- Mathematical Contest in Modeling (MCM)**
Honorable Mention for population predictions by difference equation model; Feb. 2018
- International Genetically Engineered Machine Competition (iGEM)**
 Granted *Gold Award* as an advisor of "XMU-China" team; Mar. 2017 - Nov. 2017

Languages

Oral: Mandarin Chinese (Native), English (C1), Français (B1)
Coding: C, Fortran, L^AT_EX, Mathematica, Pascal, Python, R

Selected Awards

- Normalien Scholarship**, ENS (International Selection for three years) Sept. 2019
Outstanding Graduate, Xiamen University Jun. 2019
China National Scholarship (three times) Nov. 2016, Nov. 2017, Nov. 2018
Wenqing Scholarship (18 in 14181), Xiamen University Apr. 2018

Academic References

Prof. Jérémie CAILLAT
 Sorbonne Université, CNRS, LCPMR, UMR 7614
 jeremie.caillat@sorbonne-universite.fr

Prof. Lingyun DAI
 Department of Physics, Hunan University
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Prof. Guangbin DONG
 Department of Chemistry, University of Chicago
 gbdong@uchicago.edu

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 Univ. Bordeaux, CNRS, LOMA, UMR5798
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