

Carole-Ann CHARLES

Rue des trésoriers de la bourse, 04, boîte 6
34000 Montpellier, France
Born on 20th of July, 1991
Belgian nationality
+33 766 041 840
carole-ann.charles@umontpellier.fr



PhD Student in Physics

Education

- 2018 - to date** **PhD thesis in physics**
as part of the Innovative Training Network - Horizon 2020 Marie Skłodowska – Curie, DoDyNet
CNRS and Université de Montpellier, Montpellier, France
- 2015 - 2017** **Master degree in chemical and material science engineering, specializations in polymers and macro-molecules**
Rheology, rheometry and polymer processing, polymer chemistry and physico-chemistry, molecules and materials analysis, macromolecular nanotechnology, polymer science project, polymer science and engineering
Ecole Polytechnique de Louvain, Louvain-la-neuve, Belgium
- 2010 - 2015** **Bachelor in engineering science**
Major in applied chemistry and physics, minor in mechanics
Ecole Polytechnique de Louvain, Louvain-la-neuve, Belgium
- 2009 - 2010** **Rotary Youth Exchange program**
Cibola High School, Yuma, Arizona, United States of America
- 2003 - 2009** **Secondary school certificate**
Options in mathematics, sciences, Latin and Dutch
Communauté Scolaire Sainte Marie, Namur, Belgium

Experiences

- 2018 - to date** **PhD student**
PhD thesis Subject: *Elasto-capillarity in double dynamic networks*
Supervisors: **Prof. Christian Ligoure and Dr. Laurence Ramos**
- Management of a research project from literature study to result interpretation
- Design and validation of a set-up allowing the study of biextensional deformation of soft elastic beads, Newtonian and viscoelastic fluids at very high rates by drop impact experiment in inverse Leidenfrost conditions
- Planning and realisation of experiments to investigate the behaviour of transient and double dynamic networks. Main techniques include rheology, drop impact experiments in inverse Leidenfrost conditions and spinning drop tensiometry
- Mentoring a first year MSc student in physics during his internship
as part of the Innovative Training Network - Horizon 2020 Marie Skłodowska – Curie, DoDyNet
CNRS and Université de Montpellier, Montpellier, France
- 2016 - 2017** **Second year MSc student**
MSc thesis subject: *Dynamics of linear supramolecular polymer chains in solution*
Supervisor: **Prof. Evelyne Van Ruymbeke**

Study of the dynamics of associative copolymers in solution and the effects of polymer concentration, ligand density, metal ion concentration and temperature on the viscoelastic properties of the material

Ecole Polytechnique de Louvain, Louvain-la-neuve, Belgium

2015 - 2016

First year MSc student

Project: Design of a duck leg prosthesis using a 3D printer. Selection and analysis of the appropriate materials

Ecole Polytechnique de Louvain, Louvain-la-neuve, Belgium

2010 - 2017

Waitress

“Le pain quotidien”, tearoom and bakery, Namur, Belgium

Skills

Scientific and technical skills

Rheology, optical microscopy, 3D printing, spinning and pendant drop tensiometry

Language skills

French: Native language

English: Fluent

Dutch: Elementary proficiency

Computer skills

Languages: Java, Oz

Tools: Word, Excel, Power Point, Latex, Matlab, ImageJ, OriginPro, 123D Design, Makerbot, Netfabb, HSC, Edupack

Scientific communications

Posters

C. A. Charles, L. Ramos, C. Ligoure, *Elasto-capillary Effects in Transient Networks*, Workshop on “Polymers in fast flows”, Anacapri (Italy), July 2019

Articles

A. Louhichi, S. Arora, C. A. Charles, L. Bouteiller, D. Vlassopoulos, L. Ramos, C. Ligoure (2019), *The role of extensional viscosity in the expansion dynamics of sheets formed by drop impact of a viscoelastic thinning fluid.*, submitted to Phys. Rev. Fluids

Other interests

Traveling, reading (in English and French), cooking, swimming and drawing