ADRIENJEANTET

POST-DOCTORATE PHOTOVOLTAICS

Linkedin Profile
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SKILLS

Optics

- Confocal Microscopy (single object, ensembles)
- Time resolved experiments (femtosecond laser)
- Visible and infrared spectroscopy with low SNR
- Cavities for emission/absorption enhancement
- Fiber optics (multimode and singlemode)

Condensed matter

- Photoluminescence, absorption of (single) carbon nanotubes
- Impact of chemical environment on carbon nanotube optics
- Interactions between excitons and phonons
- Group working on quantum dots, quantum wells and NV centers
- Introductory lectures on condensed matter at University

Informatics

- **Data Analysis :** Matlab, Python, R, Origin
- **Device Interfacing :** Labview, Python
- **Office** : LaTeX, LibreOffice, Word, Excel, PowerPoint
- **Graphic design :** Blender 3D, Inkscape, Gimp

Transverse skills

- Autonomy, rigor, perseverance
- International collaborations (sample, characterization)
- Mentoring of two PhD students and two interns
- Oral and written communication (English, French)

French ★★★★★ **English** ★★★★½ **Spanish** ★★★☆☆ **Portugeese** ★★☆☆☆

EXPERIENCE

Sept. 13 Now

PhD - Carbon nanotube based single-photon sources

École Normale Supérieure, Paris, France

I'm finishing a 4 years long PhD in Physics focusing on the optical characterization of nano-objects at the Ecole Normale Supérieure of Paris, under the supervision of Dr. Yannick Chassagneux and Pr. Christophe Voisin.
Our nanosciences group works on several nanotechnologies : carbon nanotubes, quantum wells, quantum dots as well as nano-diamonds. My work consisted in manufacturing micro-cavities and in building an integrated characterization setup to enhance the PL efficiency of single carbon nanotubes (from1% to 50%). Briefly, my tasks involved preparation of samples (nanotubes synthesized by collaborators), building from scratch of the full experiment (scanning confocal microscopy and tunable micro-cavity setup), software development, optical characterization (spectroscopy, lifetime, autocorrelation), data analysis and modeling.

2016 2017

First author peer reviewed publications

> A. Jeantet et al., *Physical Review Letters 116, 247402 (2016)*, Widely tunable single-photon source from a carbon nanotube in the Purcell regime
> A. Jeantet et al., *Submitted*, Exploiting one-dimensional exciton-phonon coupling for tunable and efficient single-photon generation with a carbon nanotube
> A. Jeantet et al., *Submitted*, Exciton-phonon coupling in carbon nanotubes undergoing spectral diffusion

2014 2017

Conferences attended

> IWEPN - International Winterschool on Electronic Properties of New Materials - Kirchberg 2017
> **Invited Speaker** GDR - Graphene and Nanotubes: science and applications group - Oleron 2016
> GDR - Graphene and Nanotubes: science and applications group - Aussois 2016
> JMC - Condensed Matter Days - Paris 2014

2015 2016

Prizes

> Best Poster : A numerical work - University Paris-Diderot Symposium - 2016
> Best Poster : Physics doctoral school conference - 2016
> Best Poster : CNANO international summer school on nanosciences - 2015

Sept. 14 Now

University Teaching

Université Paris Diderot, Paris, France

> Lectures : Brief introduction to condensed matter (3rd year students).
> Tutorials and lab works : Optics (2nd year student).
> Group management, pedagogic communication

May 12 Aug. 12

Research Internship in India

Indian Institute of Sciences, Bangalore, India

> 4 months experience in the Indian leading university IISc.
> Team working in and international environment.
> Experience of project cost management in a developing country.

EDUCATION

2015 now — **Energy & Economy courses** — Massive Online Open Courses
> Our Energy Future, University of San Diego
> Politics and Economics of International Energy, Sciences Po
> Global Energetic Issues, Mines de Paris
> Contemporary Economic Issues, University Paris 2

2012 2013 — **Master's Degree (MSc) in Condensed Matter** — Université Paris 6 UPMC, Paris, France
The ”International centre for Fundamental physics” master’s degree is one of the most selective in France. Grade A.

Jan. Aug. 2012 — **Master courses in India** — Indian Institute of Sciences, Bangalore, India
Second semester in Bangalore, focus on nanosciences and optics.

2010 2012 — **Normalien - Bachelor's Degree (BSc) in Physics** — ENS of Lyon, Lyon, France
Admission to the ENS of Lyon through a selective competition, obtaining the ”normalien” status (4 years fellowship for BSc and MSc).

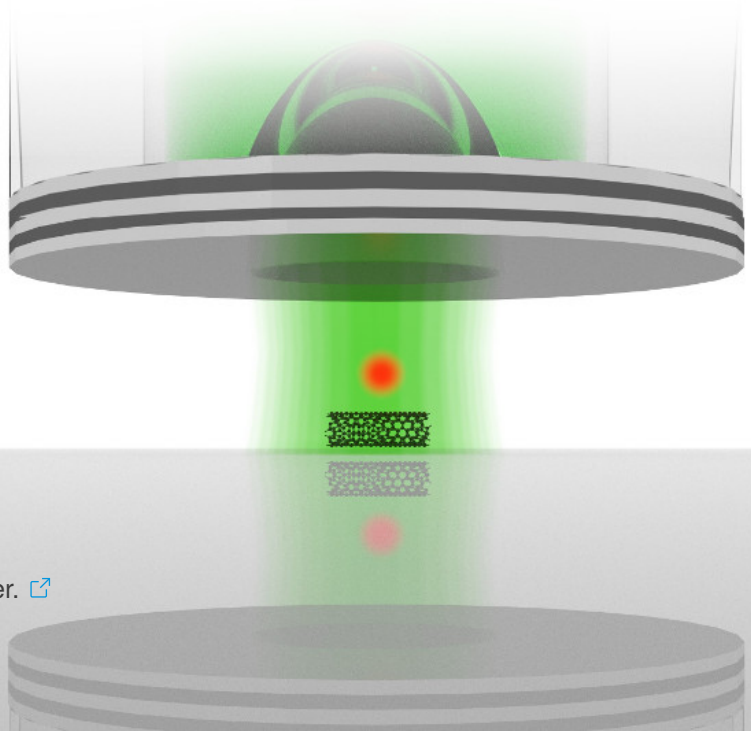
PERSONAL COMMITMENTS

Jan. 2016 Now — **Member of the Board** — Doctoral School PIF, Paris, France
> Representative in a doctoral school supervising 500 PhD students
> Negotiation and conflict resolution.

Sept. 2015 Now — **Scientific Outreach**
> Creation of an Interdisciplinary team for scientific outreach in open air.
> Writing for Euroscientist association website
> Realisation of a five minutes video presenting my PhD (>7000 views)

Since 2008 — **Associations supported**
> Fondation Énergies pour le Monde (Energies for the world)
> Aide et Action (Education)

Personal informations
> 27 years old, French citizenship
> Driving and boat license
> Hobbies : Traveling, Tango, Yoga sailing and Scuba Diving



An example of illustration for scientific outreach :
A carbon nanotube emits a single photon in an optical fiber.

REFERENCES

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