



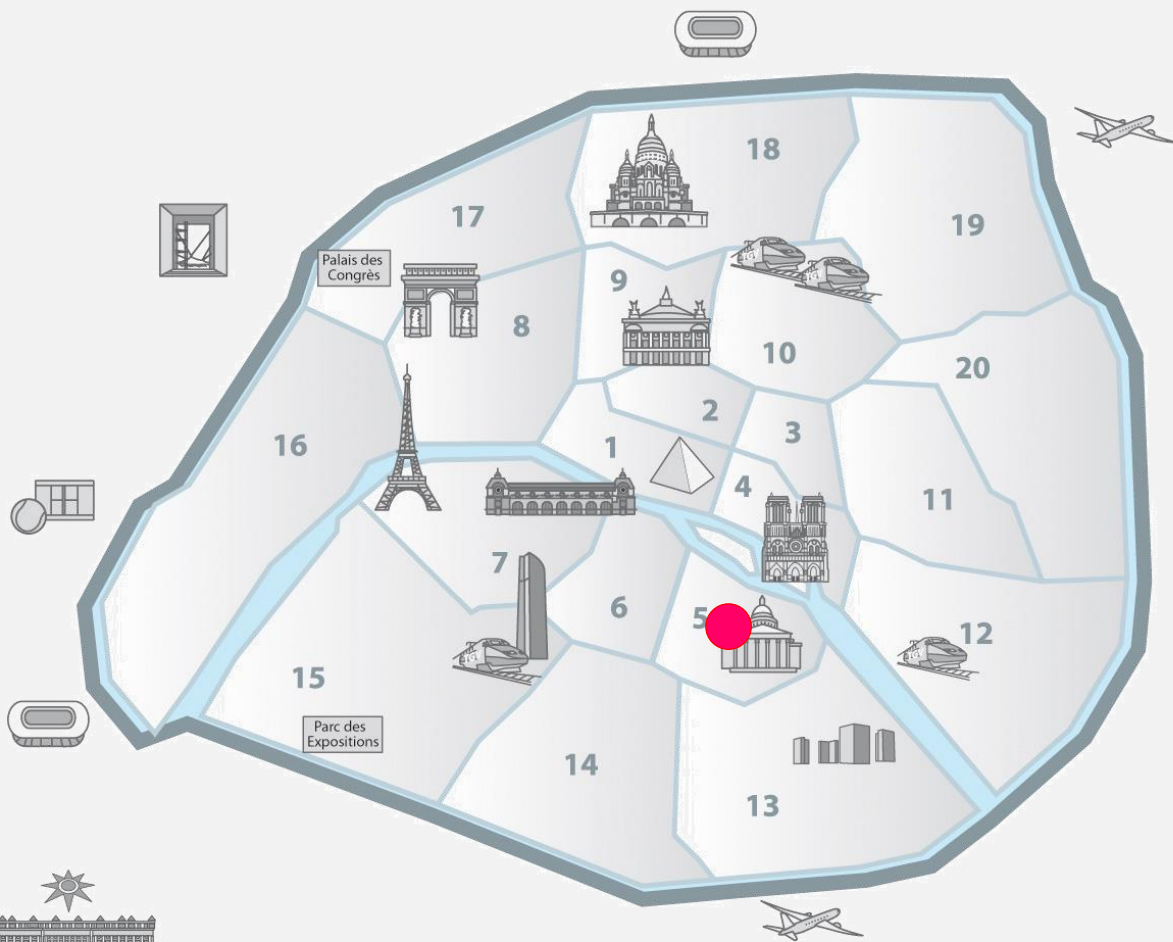
Université PSL

Chimie ParisTech

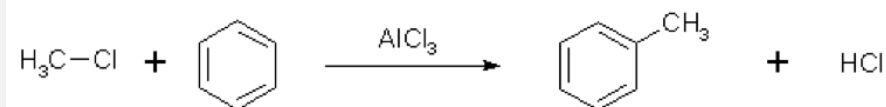
.....

***Fostering talents for
tomorrow's chemistry***

Chemistry at the heart of Paris

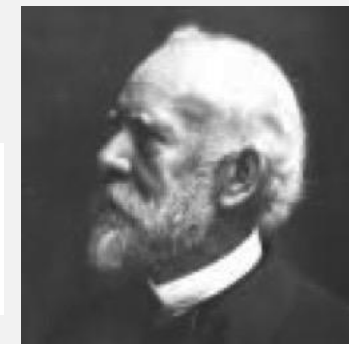


- 1896: Founded by Charles Friedel



« Young chemists devoted to industrial careers should have a scientific background as solid as that of those embracing purely academic ones »

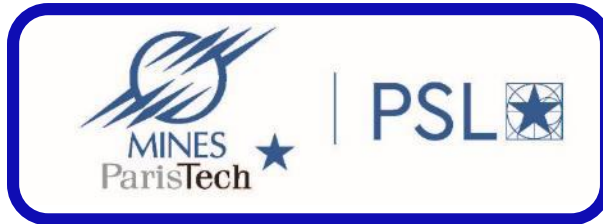
- 1899-1907: Directed by Henri Moissan (Nobel Prize winner 1906)
- 1916: First woman embracing engineer career in France
- 1904: Eugène Schueller, founder of



L'ORÉAL
PARIS

Our PSL University: a young university with renown members

MEMBERS AND RESEARCH CENTERS



ASSOCIATES



ParisTech

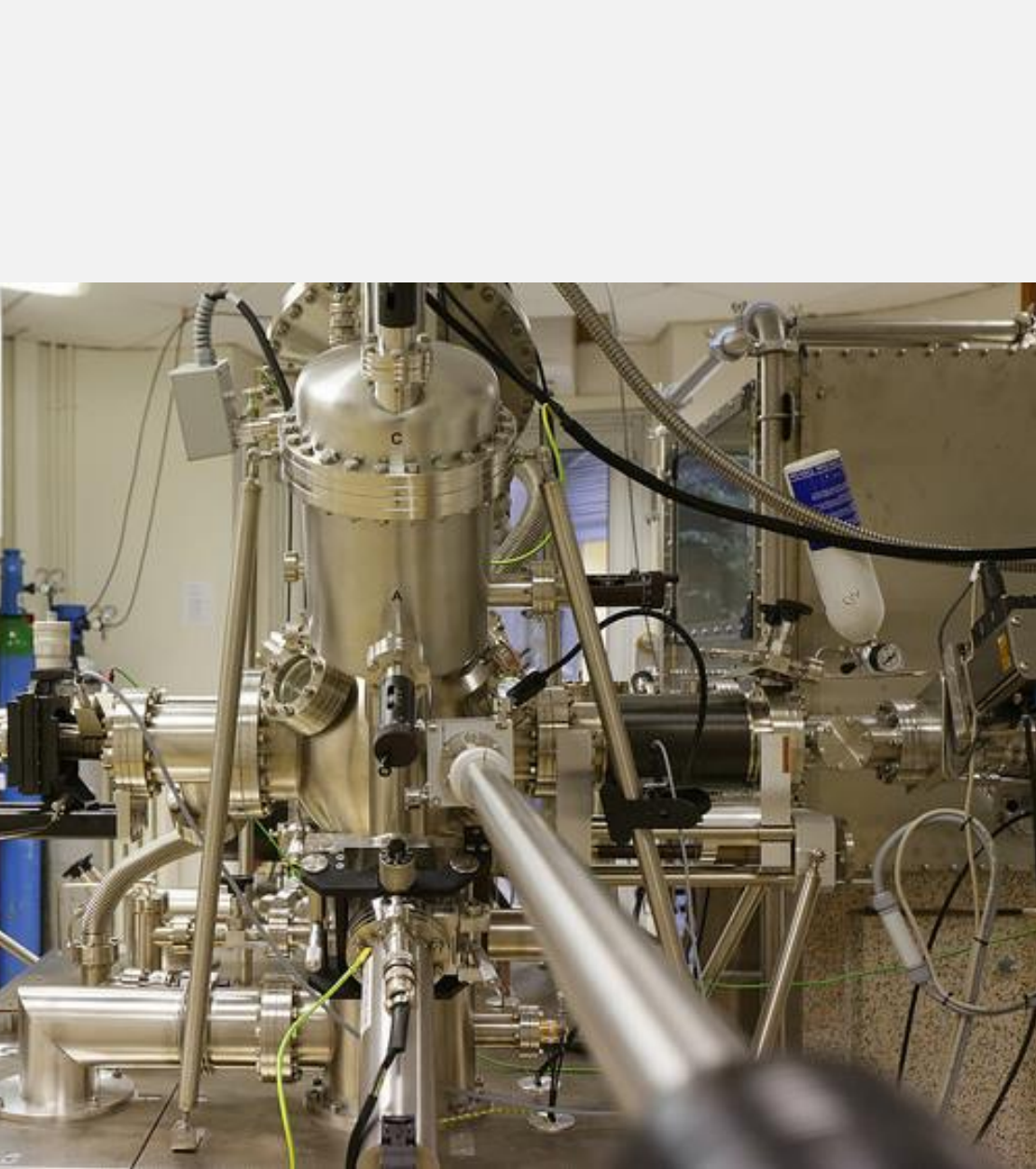
AN EXCEPTIONAL UNION OF TEN GRADUATE SCHOOLS ENABLING A UNIQUE TRANSDISCIPLINARITY



- 6 ParisTech Schools are in the top 10 out of 250 Engineering Schools in France
- Each School is ranked #1 at the national level in its specific domain

Shared-values

- Excellence based on the model of French “Grandes Écoles”
- Openness as a driver for growth: international openness, social diversity, openness to new pedagogical methods
- The quest for innovation, key to future successes for our Schools



OUR VISION.....

Provide basics & fundamentals courses in all fields of chemistry illustrated by a cutting-edge research



Key figures



Training

Highly selected
students
(50% of women)



Researchers and
Professors & Associate
Professors

1 Prof for 3
students



40%

Practical training

20%



Business, management
and human skills

12 months

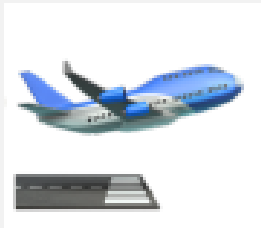
Mandatory internship



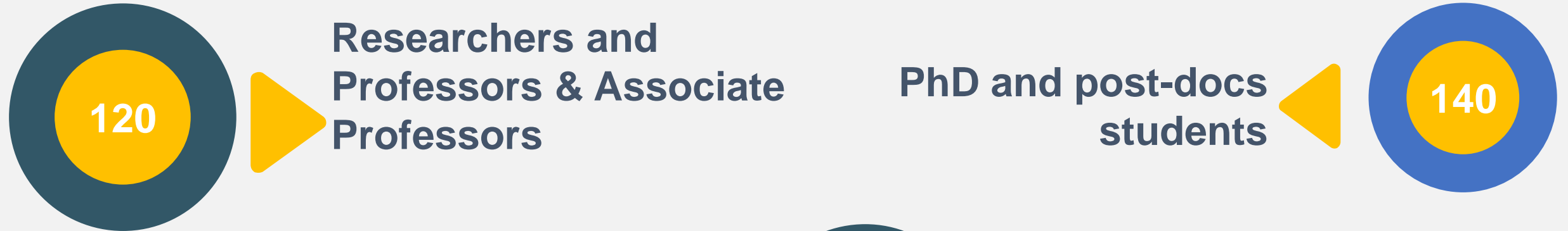
20%
international
students



abroad



Research



Research & Development

Chairs
with AREVA & Eco-Systèmes



2

50% of PhD funded by
companies

2 Labcom
(joint lab with SMEs)

>40

Research contracts
per year



Innovation & Start-Ups

Energo

Plasma catalysis technology
for methanation of CO₂

European patent [EP15202925.2] 2015

plasma-

Our incubator: **Chimie Paris Innov**
Cofunded by the European Union

➤ 6 start-ups since 2018



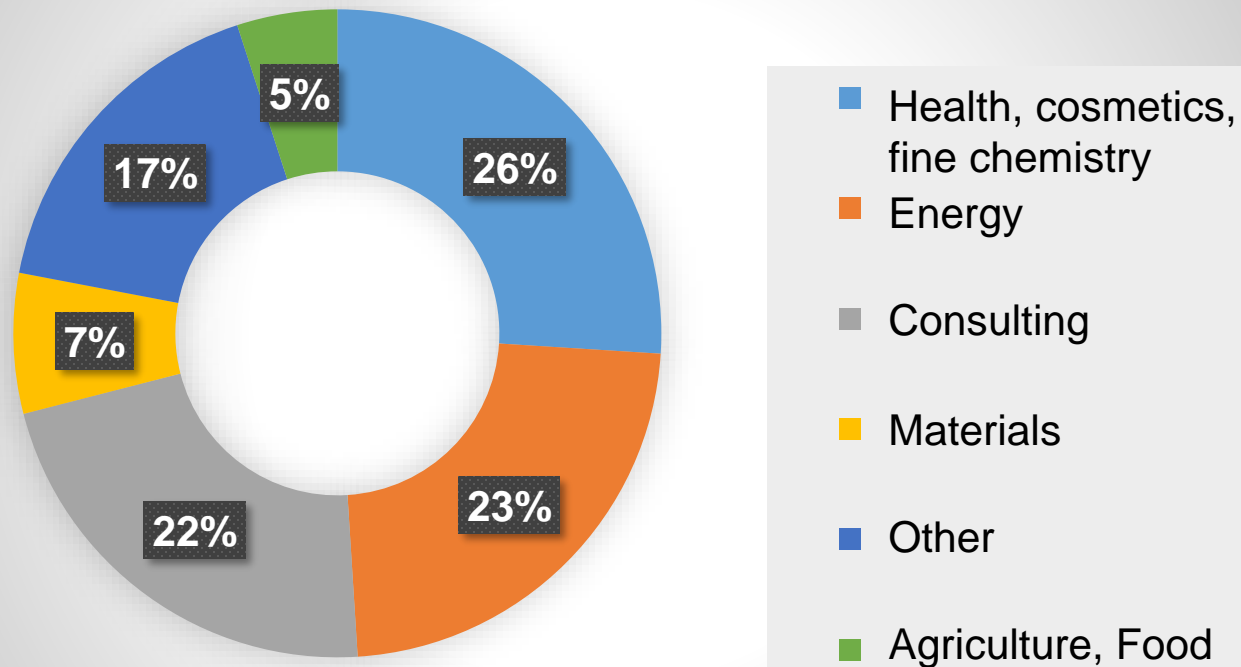
Zinc-Air

Cheap and Safe Batteries
for Electrical Vehicles
& Stationary Electricity Storage



Employability of our Engineers

90 % of the students get a job or PhD before the graduation ceremony
(December)



Class 2017 (126 students)





Training



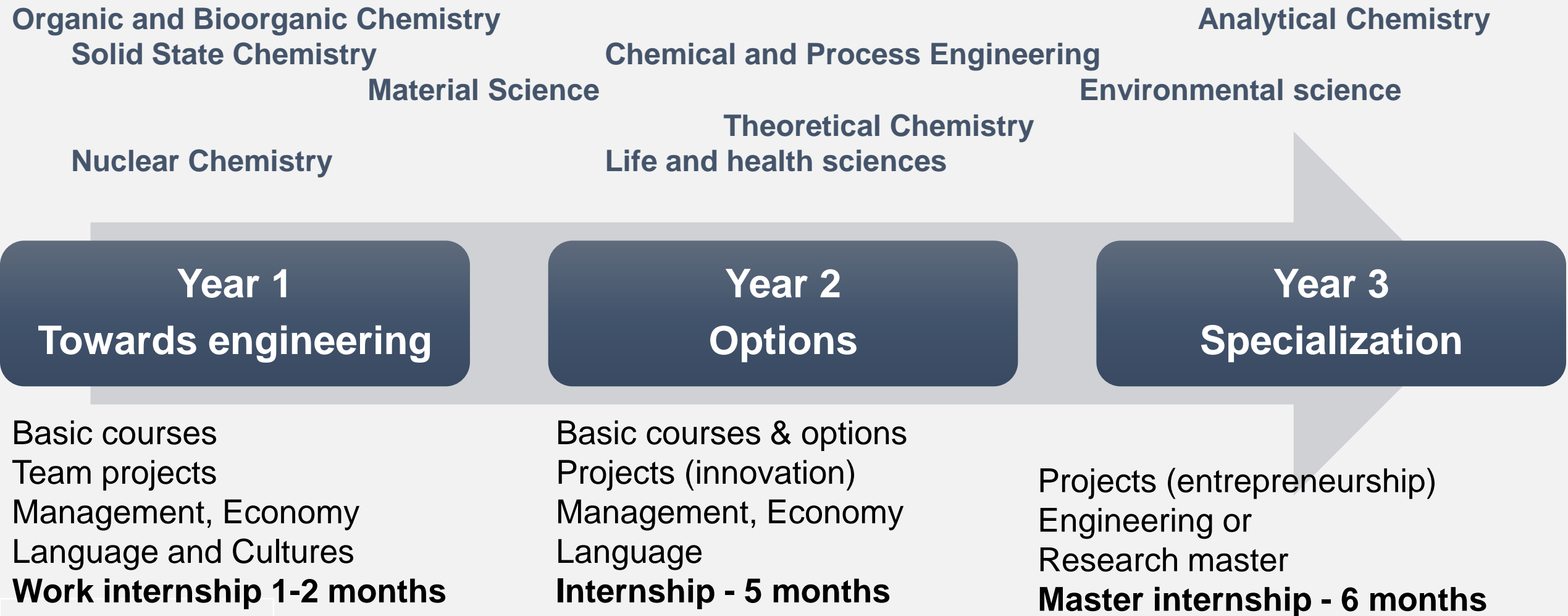
Engineering Masters & PhD

HIGHER EDUCATION SYSTEM

Master level



Training top level professionals in chemistry



• **12 months** of mandatory internship • Regular meetings with **industrials** (conferences, workshops, visits)

Masters @ Chimie ParisTech

- Master *Chimie Paris Centre* (with SU):
 - ✓ Analytical, Physical & Theoretical Chemistry
 - ✓ Molecular Chemistry
 - ✓ Inorganic Materials and Polymers
 - ✓ Chemical Engineering
 - ✓ *Chemical Frontiers of Living Matter*
- Master of Nuclear Energy
- Master *Material Science (PSL)*
- Master *Energy (PSL)*
- Master *Molecular Pharmacology* (with Paris Descartes)
- Master *Material Science and Nanoobjects* (with SU)

ENGINEERING

PhD

MASTER

- Chemical engineering and advanced technology
- Physical chemistry and analytical chemistry
- Molecular chemistry
- Material physics and chemistry



Research



A world class research made to tackle global societal challenges

Integrated research: from the concept to the device / process, tuned to downstream applications

Research at the interfaces: physical, engineering and processes, biology, medicine

Unfocused research, convenient to the reactivity and to the emergence of innovative subjects and risk-taking



Energy



Environment



Materials



Health

Our main research areas

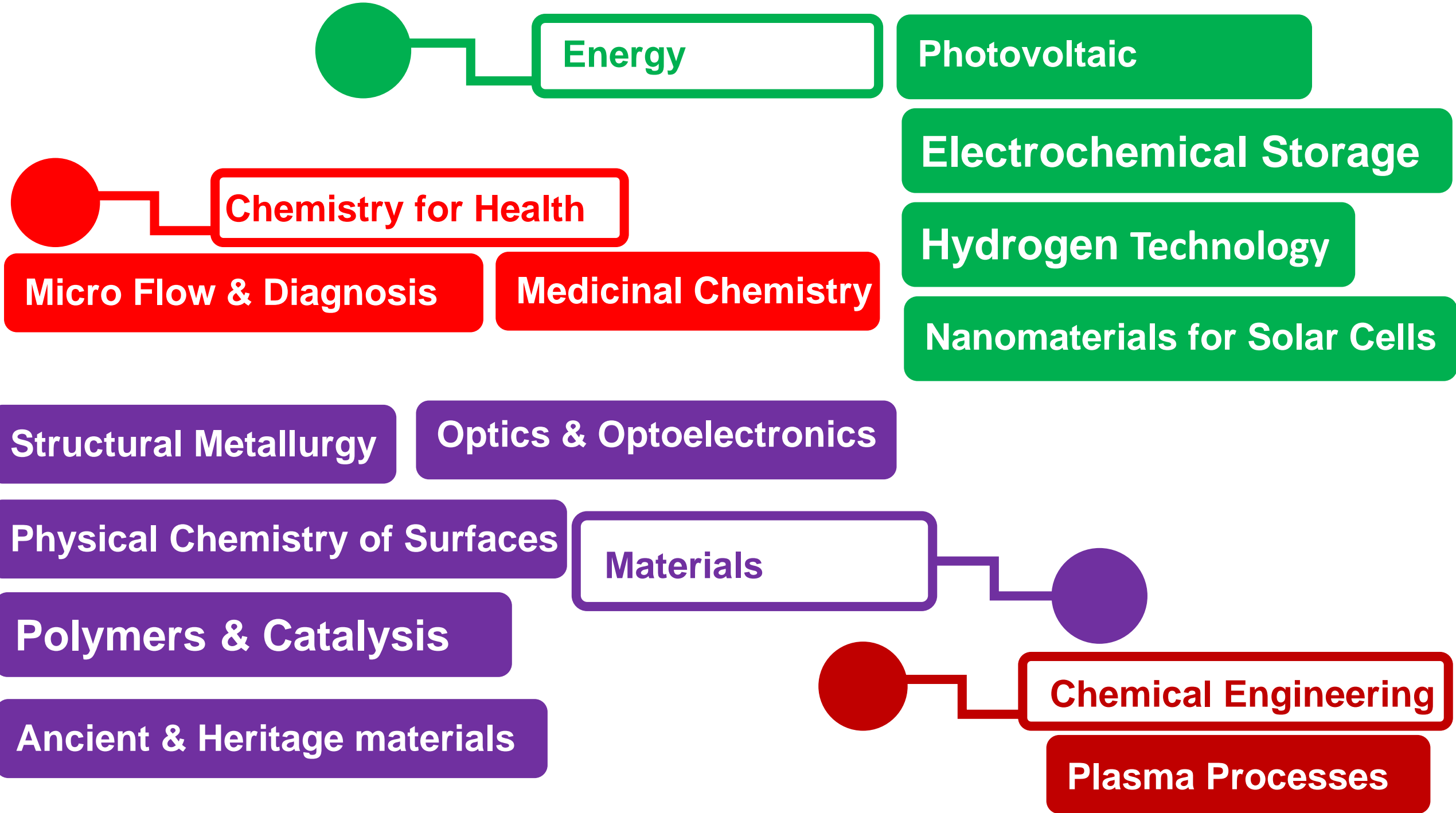


Chemistry for Materials & Energies

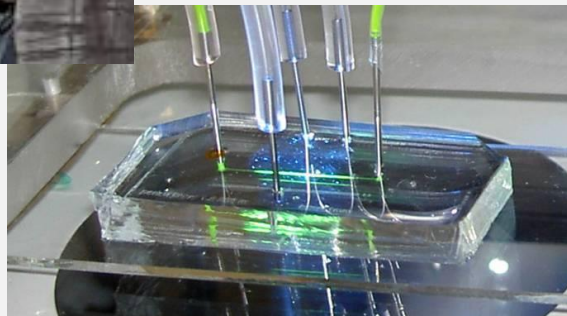
- ✓ Materials Sciences
- ✓ Thin Films and Surfaces
- ✓ Chemical Engineering
- ✓ Organometallic Chemistry
- ✓ Polymerization Catalysis
- ✓ Energy
- ✓ Microsystems
- ✓ Heritage materials
- ✓ Nano materials & structures
- ✓ Modelisation

Chemistry for Life Sciences & Health

- ✓ Analytical physico-chemistry : electrochemistry, separative methods & coupling of detection techniques
- ✓ Miniaturization
- ✓ Imagery
- ✓ Organic synthesis and methods for imaging and screening
- ✓ Modeling & theoretical Chemistry
- ✓ Inorganic Biological Chemistry, Medicinal Inorganic Chemistry, Medicinal Organometallic Chemistry
- ✓ Catalysis, Synthesis of Biomolecules and Sustainable Development



Pierre Gilles de Gennes Institute for microfluidics



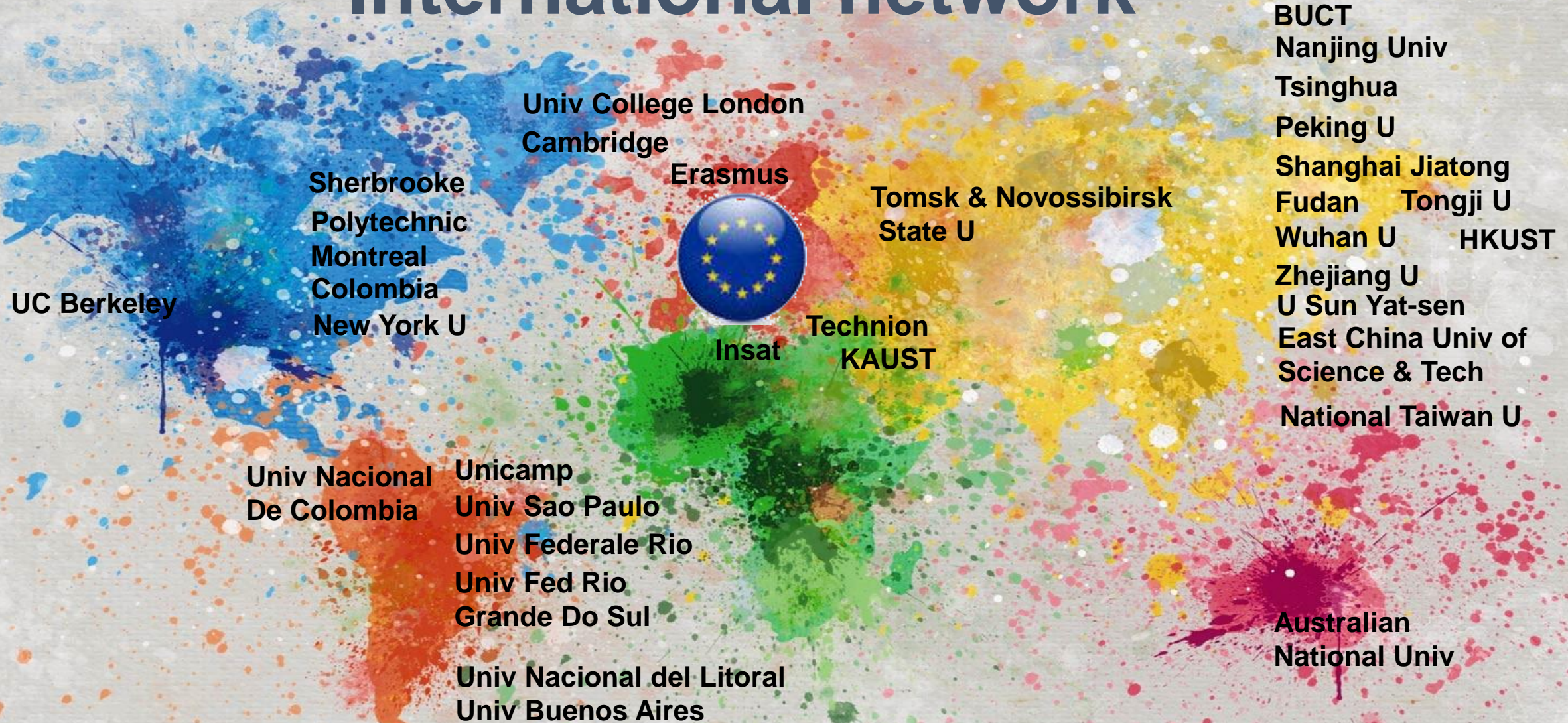
- National excellence laboratory
 - Created in 2011
 - € 28.2m project
 - To bring together, in a cross-disciplinary domain, experts from various disciplines (Physics, biology, chemistry, technology)
 - To develop both basic and applied research
- www.institut-pgg.com



Implementation of exchanges



International network



Engineering cursus @ Chimie ParisTech



Year 1

Towards engineering

Basic courses
Team projects
Management, Economy
Language and Cultures
Work internship 1-2 months



Year 2

Options

Basic courses & options
Projects (innovation)
Management, Economy
Language
Internship - 5 months



Year 3

Specialization

Projects (entrepreneurship)
Engineering or
Research master
Master internship - 6 months

• **12 months** of mandatory internship • Regular meetings with **industrials** (conferences, workshops, visits)

Second year : New applications

1 Sept-31 Dec



1 Jan-30 Mar



1 Apr-30 Aug

2 quarters:

- **1st**: Common bases: Chemical engineering, Metallurgy, Polymers, Analytical chemistry II, Biochemistry, Nuclear energy and radioactivity, Thermostatistics and modelization, Inorganic chemistry
- **2nd**: one option among • Molecular chemistry • Materials • Chemical engineering • Analytical and Biological Chemistry • Biotechnologies

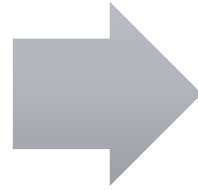
« **Techno project** » (1/2 day per week, teamwork): Building of a prototype

➔ innovation skills

Internship
(4- 5 months)

Third year: specialization industrial innovation and/or research

1 Sept-31 Jan



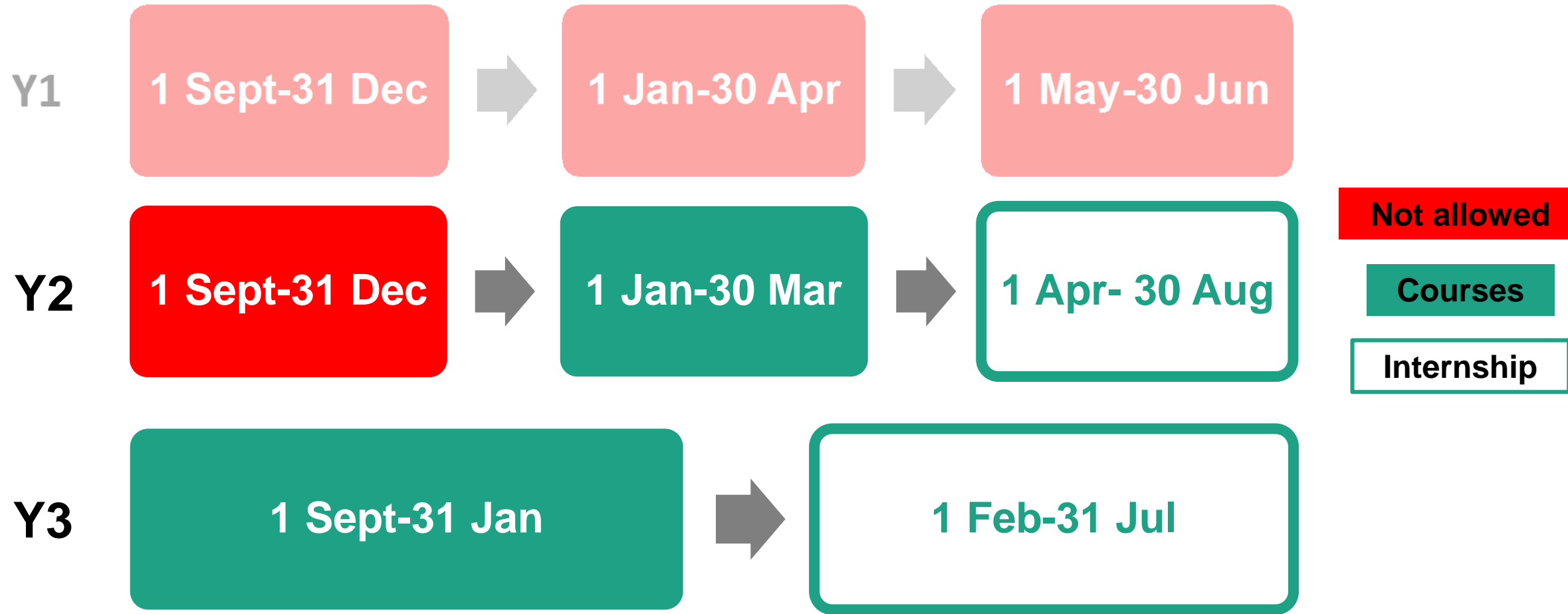
1 Feb-31 Jul

Engineering

Biotechnologies
**Sustainable processes &
materials**
Industrial processing
Green organic chemistry
Cosmetology and Formulation
Energies

Internship
(6 months)

Regular international mobility Exchange “engineering track”



<https://www.chimieparistech.psl.eu/admissions/>

International mobility “Master track”

M1

1 Sept-30 June

Including 3-4 months of Internship

M2

1 Sept-31 Jan

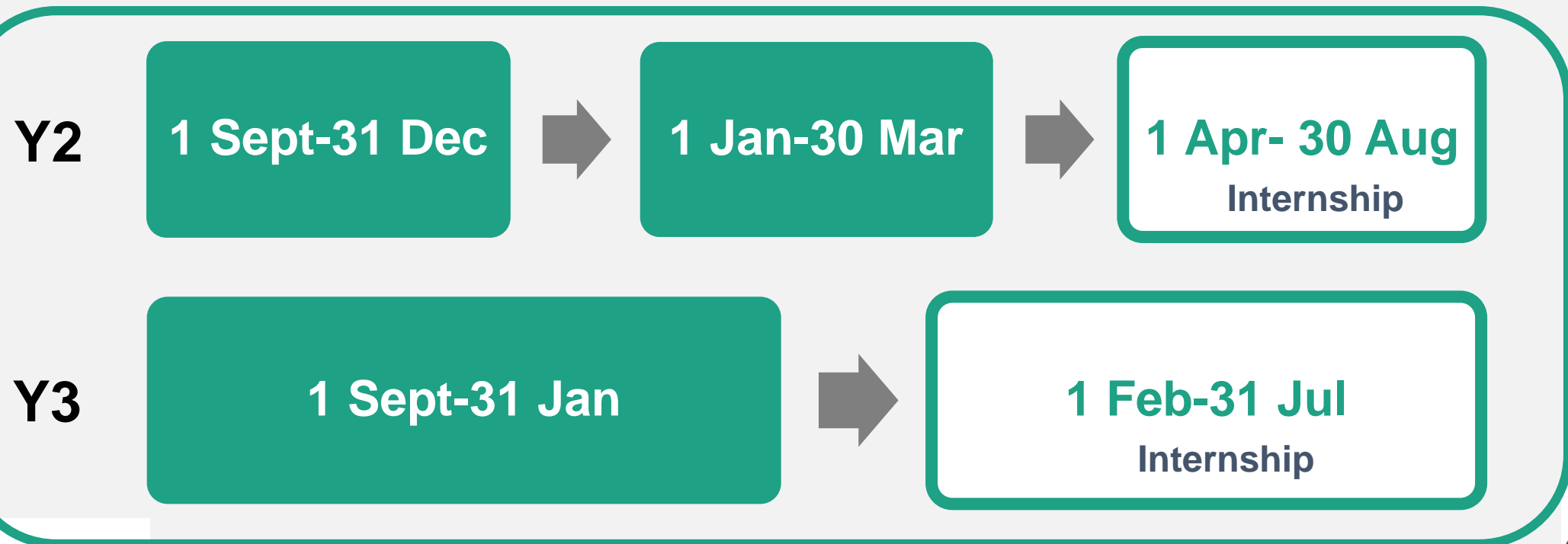
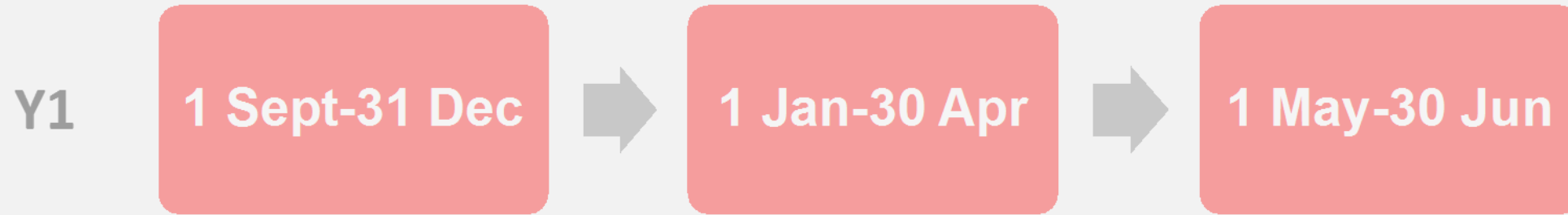


1 Feb-31 Jul

Internship

Double Degree agreement

3 semesters @ Chimie_ParisTech & 2 internships



courses are taught
in French

www.chimieparistech.psl.eu

International Relation Office

Dr. Fethi Bedioui, Director
Mr. Antoine Mercier, Deputy
international@chimieparistech.psl.eu

Thank you !

Ecole Nationale
Supérieure de Chimie
de Paris

