

# Chemistry Department Torino University



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# THE DEPARTMENT

## Staff

About **300** professors, researchers and technicians work at the Chemistry Department of Torino University. PhD students and post-doc fellows are 2/3 of the [staff](#)



## Students

The educational activities of the Department involve about **2000** students

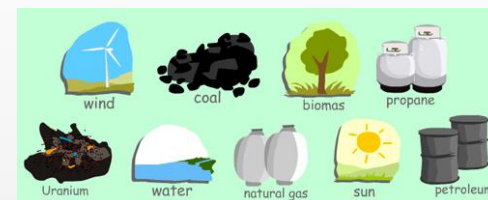


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# OUR VISION

## CHEMISTRY is:

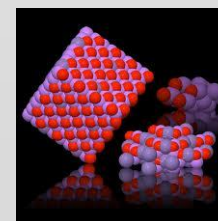
- **GLOBAL SCIENCE** overcoming traditional borders between disciplines and industrial sectors
- **CONNECTION**
- **PROMOTER of TRANSITION** from linear to circular economy, useful to increase sustainability and competitiveness of our society
- **KEY FACTOR** for an economic growth not limited to the industrial sector (for instance, increase of the manufacturing productivity, quality and safety of products, reduction of the industrial waste etc.)
- **KEY FACTOR** to improve everyday life (for instance, health, new clean technologies etc.)



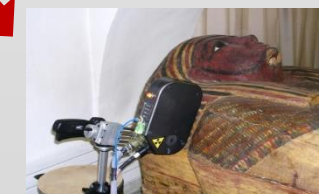
Better use of natural resources



New clean technologies

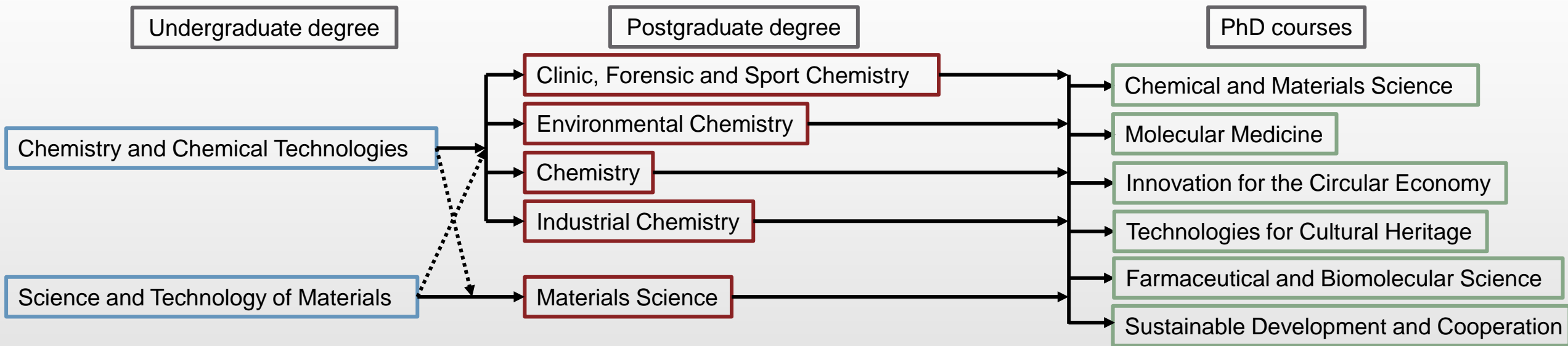


New materials



Cultural heritage protection

# EDUCATIONAL ACTIVITIES



**Thought for:**

- Supplying a **basic formation** for all the chemical disciplines
- Following the **highest international standards**
- In agreement with **social and industriale needs of the territory** indicated by local stakeholders
- Guaranteeing **occupation of graduate students in a variety of companies and services.**



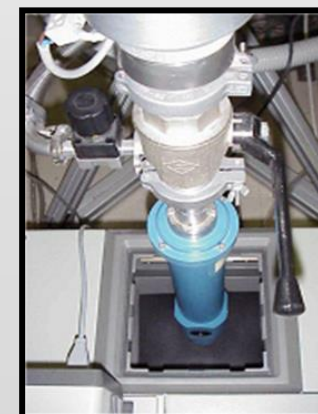
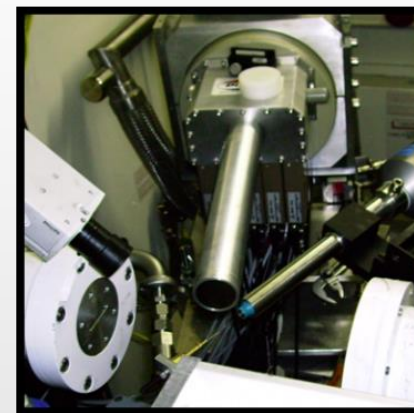
# INSTRUMENTS

The Chemistry Department - together with the research groups - possesses and manages **CUTTING EDGE INSTRUMENTS FOR SEVERAL MILLION EUROS**

- Synthesis structures
- Vibrational and electronic Spectroscopies
- **Magnetic Resonance Spectroscopies (2017)**
- Ultra-high resolution transmission microscopy (HRTEM)
- **Scanning electron microscopy equipped with field emission gun (FE-SEM) (2019)**
- **X-Ray Diffractometer (2019)**
- Chromatographies
- **Mass Spectrometer Orbitrap (2017)**
- **High Performance Computational Workstations OCCAM (2017)**
- Laboratories for students

## 2022 coming instruments:

- Magnetic Resonance instrument
- High-Resolution mass spectrometer coupled with Liquid Chromatography (UHPLC)
- Inductively coupled plasma-mass spectrometer (ICP-MS/MS)



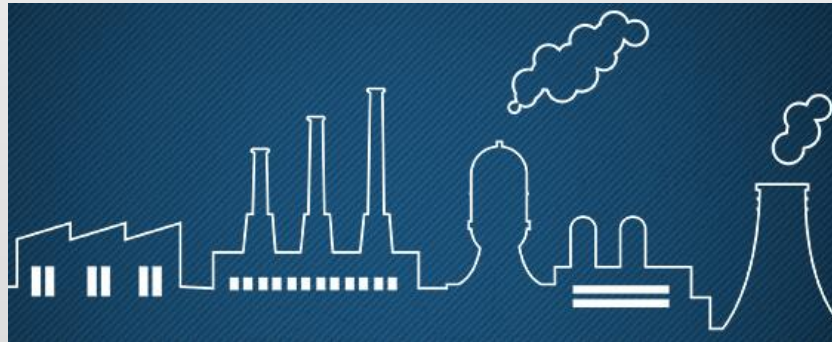
# RESEARCH & COLLABORATIONS

**Research funds:** total budget of about **8 million euros for year** (2020). The main funding sources are:

**Projectuality:**

- **UE PROJECTS** → 20
- **OTHER INTERNATIONAL PROJECTS** → 6
- **NATIONAL PROJECTS** → 80

**Private sector:** budget of about **2 million euros** from collaborations with companies in 2020.



**3 Spin-off**



**3 patents for year (on average)**



**More than 100 active contracts**





# A SHOWCASE ON RESEARCH AND POSSIBLE COLLABORATIONS



## CHEMISTRY AND HEALTH

People's health and quality of life are the basis of an active and dynamic society. Knowledge of human metabolism, as well as development of new medicines, innovative...

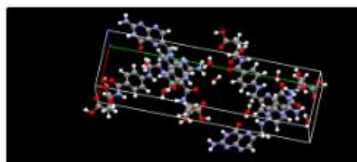
[more about →](#)



## ADVANCED MATERIALS

Our everyday life is strongly influenced by materials: transportation, recreation, clothing, health, food production, security. To discover, produce and characterise new materials...

[more about →](#)



## COMPUTATIONAL CHEMISTRY

Using computational clusters and powerful programs, computational chemists can predict the motions, reactivity, aggregation and formation of complex molecules up to predict their...

[more about →](#)



## CHEMISTRY AND ENVIRONMENT

Chemistry plays a central role not only in describing and understanding environmental processes, but also in allowing the achievement of a correct balance between human activities...

[more about →](#)



## GREEN CHEMISTRY

Chemistry can and must provide knowledge and technologies for the sustainable management of resources and lifestyles. With a reversal of perspective, as a voracious consumer...

[more about →](#)



## CULTURAL HERITAGE

The study of the archaeological, historical and artistic heritage, as all the cross-disciplinary researches, generate a huge added value, both cultural and socio-economics. This is...

[more about →](#)



## CHEMISTRY AND FOOD

Today food paradigmatically represents the complexity and interconnectedness of knowledges where themes such as health, education, culture and enhancing the excellence of local...

[more about →](#)



## ENERGY

Clean, renewable, low cost and sustainable energy distribution to people all over the world is nowadays one of the most demanding challenges to mankind.

[more about →](#)



## CHEMISTRY AND EDUCATION

Scientific skills are fundamental for the culture itself, the self-care, sight on issues of great social, environmental and ethical relevance for all scientists, stakeholders and...

[more about →](#)

## [The research at the Department](#)



# CONTACTS

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