Junior Professor Chair (tenure track position) - Physics in transition (F/H)

HIRING DATE October - November 2025 **LOCATION** 60 RUE MAZARINE 75006 PARIS
SCHOOL PSL

WORKING ENVIRONMENT AND CONTEXT

HOSTING STRUCTURE

Wholly committed to excellence in education, training and research, PSL is a global university, which aims to reflect, represent and influence society today and the world of the future in all its diversity. The university's collegial ethos is a major asset. Made up of eleven component institutions, including Ecole normale supérieure, PSL ensures that dialogue takes place between all areas of knowledge, innovation and creativity in science, humanities, social sciences, arts and engineering. PSL offers an education led by the research carried out in its laboratories while encouraging discussion and mobility between disciplines and across schools. Our university exercises critical thinking and fosters creativity. Students are selected on the basis of their potential and talent. The university champions equal opportunities and promotes social, cultural and geographic diversity, and students are guaranteed individual mentoring, small class sizes and personalized academic pathways.

PSL University has placed the climate and environmental transition as one of its priority themes in research and education. The climate crisis is a hydra, and the challenges are multifaceted, whether it involves understanding physical and biological phenomena, studying the social or behavioral levers that hinder or accelerate the consideration of the climate challenge, reflecting on the issues of global climate governance, or, therefore, producing technologies that can provide solutions to the climate crisis. The decarbonization of society requires technological breakthroughs that do not exist today, or that exist only as preliminary concepts. We must develop and fully exploit the most promising scientific advances to imagine radically new pathways and accelerate their transformation into technologies impacting the transition on an industrial scale.
This requires developing high-level research on topics that can, directly or indirectly, have large-scale impacts, and developing the innovation potential of this research, as has already been the case within the physics department at the ENS-PSL itself—with the creation of breakthrough innovations and startups, particularly around topics related to the environmental transition (Sweetch Energy, Hummink, Ilion, etc.).

Strengthening these innovative topics, which are drivers of innovation and very attractive to students (see below), is a priority that will complement other major PSL initiatives on the climate issue, such as the TERRAE Major Research Programs (holistic and transdisciplinary approaches to the climate transition) or various PEPR (FairCarbon, OneWater, AtlaSEA, etc.)
The ENS-PSL physics department - and its two affiliated laboratories, LPENS and LKB - are keen to step up their involvement in the development of research themes that will ultimately provide solutions for the environmental transition.
In many areas, advances in physics have the potential to have a transformative impact on key aspects of the climate crisis. Within the department, there are many examples: whether it be around the 'water-energy nexus', with the development of 'entropic technologies' or unconventional approaches to desalination, the introduction of quantum technologies for energy storage, the development and application of advanced computational techniques for the rational design of more efficient and sustainable catalysts, the exploration of unconventional methods of recovering lost heat, or the reduction of computational energy costs, notably for artificial intelligence, etc.

Université PSL is launching a call for applications for a Junior Professor Chair in Physics, climat transition climatique and innovation titled "Physics for transition" whose activity will take place at the ENS-PSL Physics department.
This is a tenure-track position with a reduced teaching load leading to a full professorship in the Physics Department at ENS (ENS-PSL, https://www.phys.ens.fr/).
The position can be taken up from December 2025, or at a mutually agreed date.
The position is open to all researchers wishing to develop their activity in physics or physical chemistry for the transition. The position includes an internationally competitive salary and start-up package.

For this CPJ, any theme is possible as long as the potential impact of the research project on the environment is clearly targeted and stated.

This CPJ project is part of the ‘Physics for Transition’ initiative run by the ENS-PSL Physics Department, which aims to create an internationally attractive hub for top-level researchers working at the interfaces between physics and the fight against climate change.
This position will be attractive because of the welcome package (ANR package), the high-level scientific environment at LPENS and LKB, and the proximity to very high-level innovation teams (in the ENS-PSL physics department and at PSL Valo).
We expect very high-level international applications, and for the winner to be able to attract very high-level international PhD and post-doctoral students. ‘Physics for Transition’ will be able to develop international partnerships with the Max Planck Gesellschaft and the Flatiron Institute in New York.

TEACHING MISSION

PHYSICS DEPARTMENT ENS-PSL

The recruited junior professor will be able to take part in various PSL courses, for example cross-disciplinary courses (and his or her lessons could be shared between several courses if necessary):

- **PSL's ‘Sciences for a sustainable world’ bachelor's degree**
- **PSL Physics Master's degree**
- **PSL Master's degree in ‘Sustainability Sciences’ (opening September 2024)**
- **PSL Innovation Deeptech minor (opening September 2024)**

RESEARCH MISSION

PHYSICS DEPARTMENT ENS-PSL

The junior professor recruited will be expected to propose high-level fundamental research in physics and its interfaces (chemistry, engineering sciences, AI, etc.), the theme of which is completely open, but whose possible long-term impact on the environmental transition will need to be demonstrated as part of a scaling-up process.
The department wishes to explore all the fundamental advances in nanoscience linked to energy, fluids and ion-electron interfaces, thermoelectricity and its fluid variants, catalysis coupled to a single atom and light-matter processes for the conversion or formation of small molecules such as CO2, N2, H2 etc... Quantum concepts will be fully exploited to devise new technologies for unconventional energy conversion, ultrasensitive detection for sensing, superluminescence from cold sources, energy storage in cavities, etc.

NON DISCRIMINATION, OUVERTURE ET TRANSPARENCE

L'Université PSL s'engage à soutenir et promouvoir l'égalité, la diversité et l'inclusion au sein de ses communautés. Nous encourageons les candidatures issues de profils variés, que nous veillerons à sélectionner via un processus de recrutement ouvert et transparent.

HIRING PROCESS

See job description attached

APPLICATION PROCESS

Application deadline : September 17th 2025, 4pm (Paris-France local time)

Candidates must complete an application on the Odyssee platform : **See link and application file in attached job description (Fiche de poste in Contact area).**

CONTACT

OTHER INFORMATION

Recherche principal : **Physique** Recherche secondaire : **Physique chimique**
Durée du contratUp to 6 years

Experience years	Position open to BOEs	Reference
1 à 4 années d'expérience (R2)		**Offre Odyssée position n° 253066**
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