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## PCC - Unité physico-chimie Curie

Rapport Hcéres

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## REPORT ON THE RESEARCH UNIT:

Laboratoire Physico-Chimie Curie  
PCC

## UNDER THE SUPERVISION OF THE FOLLOWING INSTITUTIONS AND RESEARCH BODIES:

Université Pierre et Marie Curie

Institut Curie

Centre National de la Recherche Scientifique -  
CNRS

**ÉVALUATION CAMPAIGN 2017-2018**  
**GROUP D**



In the name of Hcéres<sup>1</sup> :

Michel Cosnard, President

In the name of the expert committee<sup>2</sup> :

Pierre-François Lenne, Chairman of the  
committee

Under the decree No.2014-1365 dated 14 November 2014,

<sup>1</sup> The president of HCERES "countersigns the evaluation reports set up by the expert committees and signed by their chairman." (Article 8, paragraph 5);

<sup>2</sup> The evaluation reports "are signed by the chairman of the expert committee". (Article 11, paragraph 2).

This report is the sole result of the unit's evaluation by the expert committee, the composition of which is specified below. The assessments contained herein are the expression of an independent and collegial reviewing by the committee.

## UNIT PRESENTATION

<b>Unit name:</b>	Laboratoire Physico-Chimie Curie
<b>Unit acronym:</b>	PCC
<b>Requested label:</b>	UMR
<b>Application type:</b>	Renewal
<b>Current number:</b>	UMR 168
<b>Head of the unit (2017-2018):</b>	Mr Maxime DAHAN
<b>Project leader (2019-2023):</b>	Mr Maxime DAHAN

**Number of teams or themes:** 14

## COMMITTEE MEMBERS

**Chair:** Mr Pierre-François LENNE, CNRS Marseille

**Experts:** Mr Jordi GARCIA-OJALVO, Universitat Pompeu Fabra, Barcelone, Espagne  
Mr Pascal HEBRAUD, CNRS Strasbourg, (representative of CoNRS)  
Ms Kinneret KEREN, Technion, Israel Institute of Technology, Israel  
Ms Agnès PIEDNOIR, CNRS Villeurbanne (supporting personnel)  
Mr Olivier THEODOLY, CNRS Marseille  
Mr Roland WEDLICH-SÖLDNER, Universität Münster, Allemagne  
Ms Nathalie WESTBROOK, université Paris Sud, (representative of CNU)

**HCERES scientific officer:**

Mr Christian BORDAS

**Representatives of supervising institutions and bodies:**

Ms Geneviève ALMOUZI, Institut Curie

Mr Alexandre LEGRIS, CNRS

Mr Bernard PERRIN, université Pierre et Marie Curie

## INTRODUCTION

### HISTORY AND GEOGRAPHICAL LOCATION OF THE UNIT

The laboratory Physico-Chimie Curie (PCC, UMR168) was created in 1996 with the aim of developing and applying physical concepts, particularly soft-matter and statistical physics, to the study of living systems. The unit is located at the heart of the Paris site of the Institut Curie, specifically in the Pavillon Curie, one of the two original buildings of the "Institut du Radium" founded by Marie Curie in 1909.

Over the past 20 years, under the successive leadership of Mr Jacques PROST, Mr Jean-François JOANNY and Mr Maxime DAHAN, the unit has increased significantly in size and now counts about 110 people.

### MANAGEMENT TEAM

Mr Maxime DAHAN (director) and Mr Axel BUGUIN (deputy-director).

### HCERES NOMENCLATURE

ST2 Physics  
SVE Life and environment sciences

### SCIENTIFIC DOMAIN

The research unit aims at understanding the physical and physicochemical mechanisms that underpin biological systems. Within this framework, the research topics cover biomimetic and reconstituted systems to cell biology, physical approaches to developmental biology, nuclear biology, immunology as well as translational research and clinical applications.

## UNIT WORKFORCE

Unit workforce	Number 30/06/2017	Number 01/01/2019
<b>Permanent staff</b>		
Full professors and similar positions	2	2
Assistant professors and similar positions	4	4
Full time research directors (Directeurs de recherche) and similar positions	13	13
Full time research associates (Chargés de recherche) and similar positions	10	9
Other scientists ("Conservateurs, cadres scientifiques des EPIC, fondations, industries, etc.")	0	0
High school teachers	0	0
Supporting personnel (ITAs, BIATSSs and others, notably of EPICs)	11	11
<b>TOTAL permanent staff</b>	<b>40</b>	<b>39</b>
<b>Non-permanent staff</b>		
Non-permanent professors and associate professors, including emeritus	3	
Non-permanent full time scientists, including emeritus, post-docs	28	
Non-permanent supporting personnel	6	
PhD Students	31	
<b>TOTAL non-permanent staff</b>	<b>68</b>	
<b>TOTAL unit</b>	<b>108</b>	

## GLOBAL ASSESSMENT OF THE UNIT

The PCC unit is a vibrant unit gathering physicists, physical chemists and biologists that aim to uncover the physical principles that govern biological systems. By combining theoretical expertise, statistical physics in particular, with sophisticated experimental approaches, they have significantly contributed to the understanding of living matter, after decades dominated by molecular genetics.

The combination of a solid theoretical framework and elegant experiments is still quite unique in the world and therefore attracts talented young researchers. Recent recruitments and turnover of the groups have led to the development of new themes since the last evaluation. By maintaining also internationally recognized topics, the unit has thus succeeded to maintain a leading position in a rapidly evolving field. The ability to develop sophisticated experimental approaches and technologies for fundamental and medical research is also a strong and recognized asset to the unit.

The unit should maintain its strategic position by reinforcing and extending work combining, as much as possible, experiments and theory, which is the recognized strength of the unit.

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