

# Prof. Philippe Dubois at a quick glance

(Updated in December 2018)



*Belgian, born in Charleroi (Belgium), on June 23<sup>rd</sup> 1965  
Married, 2 sons (Maxime, 24 & Thibault, 22-year old)  
Master in Chemistry; Ph.D. in Sciences (Chemistry) and postdoc in Chemical Engineering*

## **Current academic positions**

- In Belgium:
- *At University of Mons-UMONS, Mons*
    - *Rector/President of the University*
    - *Full Professor at Faculty of Sciences*
    - *Director of the Laboratory of Polymeric and Composite Materials, Center of Innovation and Research in Materials & Polymers CIRMAP*
  - *At Materia Nova Research Center, Scientific Director & President of the administration board*
  - *At NANO4 S.A. company, Cofounder & President of the administration board*
  - *At University of Liège-ULiège, Adjunct Professor*
  - *At University of Namur-UNamur, invited Professor*
- Internationally:
- *At Michigan State University-MSU, Adjunct Professor in Chemical Engineering and Materials Science, Lansing, MI, USA*
  - *At University of Luxembourg-Uni.Lu, Honorary Professor at Faculty of Science, Technology and Communication*
  - *At Luxembourg Institute of Science and Technology-LIST, Scientific Adviser in the frame of the National Composite Center-Luxembourg (NCC-L), NCC-L Scientific director in 2016/17*
  - *At Zhejiang University-ZJU, Guest professor at National Key-lab of Chemical Engineering Hangzhou, China*

## **Representative distinctions and involvements**

- *Academician - Elected Titular Member of the “Académie Royale de Belgique” (Class of Sciences) (since 2010)*
- *Elected Member of the European Academy of sciences EurASc (Engineering science Division) (2017)*
- *Past President of the Belgium Royal Chemical Society (President in 2007/08)*
- *Past Vice-Rector of University of Mons (in charge of research) (2005-2016)*
- *Scientific Associate (Scientific Director (since 1997) of Materia Nova asbl Research Center, Mons (B)*
- *Honorary Research Associate by the Belgian National Funds for Scientific Research FNRS (B)*
- *President of Japan-Belgium Association of Polymer Science (Japan/B)*
- *Member of International Research Committees/advisory boards of the “Ecole des Mines”, Alès (France), the Center of Molecular and Macromolecular Studies, Lodz (Poland), Institute IMP at University Claude Bernard Lyon 1 (France), Institute of Polymers of the Bulgarian Academy of Science, Sofia (Bulgaria), New Eurasia Foundation (FNE – Russia).*
- *Member of the Editorial Board of 18 international scientific journals:*
  - *Associate Editor of Materials Science and Engineering: R: Reports edited by Elsevier (Impact Factor of 29.23)*
  - *Founding member/Associate Editor of Nanocomposites (Taylor & Francis Group)*
  - *Editor of Material Science and Engineering with Advanced Research (Verizona Publisher)*

Member of Editorial Boards of: Biomacromolecules (IF=5.79, ACS) – journal with the highest impact factor in polymer science, Chemistry of Materials (IF=8.54, ACS), European Polymer Journal (Elsevier), Polymer Bulletin (Springer-Verlag), The Open Macromolecules Journal (Bentham Science Publishers Ltd.), Polymer for Advanced Technology (Wiley), Polimery (Industrial Chemistry Research Institute), Reviews of Adhesion and Adhesives (Scrivener Publishing) and Global Journal of Organic Chemistry (Symplex Academic Publishers), Polyolefins Journal (Iran Polymer and Petrochemical Institute), Frontiers in Polymer Chemistry (Nature Publishing group), Journal of Multifunctional Polymers (American Scientific Publishers), Packaging Research (De Gruyter Open Ltd), Coatings (MDPI AG), Journal of Biopolymer Research (OMICs Intern.), Journal of Nanomaterials (Hindawi Publishing).

- Current referee for more than 25 international scientific journals

### **Selected awards & recognitions**

#### In Belgium:

- Master's thesis awarded by the Belgian Royal Chemical Society (1987)
  - J.S. Stas Award by the Belgian Royal Chemical Society - Class of Sciences (1994)
  - Triennial Award of the Belgian Royal Chemical Society (2000)
  - Medal of the Belgian Royal Chemical Society (2008)
  - Elected titular member of the Royal Academy of Belgium (class of Sciences) (2010)
  - Medal of the Fund for Scientific Research in Flanders "Fonds Wetenschappelijk Onderzoek Vlanderen" (2009)
  - Medal of the National Fund for Scientific Research in French Community of Belgium (2010)
  - ECO-BOOSTER Belgium National Award : Belgium Award of Energy and Environment (2010)
  - ZENOBE 2011 Award : Award for Technological Innovation in Wallonia Region (2011)
  - Elected member of the European Academy of sciences EurASc (Engineering Division) (2017)
- ***FNRS Quinquennial Award in applied exact sciences (2011-2015)***, the highest scientific award delivered every five years by the Belgium FNRS and personally awarded by King Philippe of Belgium (2016)

#### International awards :

- European Cereal Award "Gerbe d'Or" (1999)
  - Citation Classic Award by the Institute for Scientific Information ISI (2000)
  - Biennial Award of the "Groupe Français d'Etudes et d'Applications des Polymères », France (2001)
  - Elected Fellow of International Union of Pure and Applied Chemistry – IUPAC (2011)
  - Prof. I. Moscickiego Medal of the Industrial Chemistry Research Institute, Poland (2013)
  - Grand Prix of the French National Polymer Association GFP, France (2013)
  - Special guest professor recognition, Zhejiang University, Hangzhou, China (2015)
  - Honorable member of Nano Canadian Society (2015)
  - PEARL Excellence Award for Research in Luxembourg (4 millions €) delivered by FNR, Luxembourg (2016)
  - ICE Award in Green Materials Journal delivered by the Institution of Civil Engineers, London, UK (2016)
  - N.N. Semenov's Medal from the Academy of Engineering Science, Russia (2016)
  - Elected member of the European Academy of sciences EurASc (Engineering science Division) (since 2017)
  - BEPS Lifetime Achievement Award 2018 by the BioEnvironment Polymer Society, New York, USA (2018)
- **Personally ranked in "Top 100 materials scientists of the 2000-2010 decade" by Thomson Reuters**  
**World ranking : 18<sup>th</sup> (over +500,000 scientists); European ranking : 5<sup>th</sup> & Belgian ranking : 1<sup>st</sup>**

### **Overall research activities**

Scientific involvement can be summarized as follows: **the key-role of "green" chemistry in nanotechnology and materials science**. Accordingly, his research activities interconnect organic chemistry, organic and organometallic catalysis, macromolecular chemistry, engineering and science of polymeric and (nano)composite materials.

Illustration by two representative success stories in the field of **Environmentally-Friendly, Bio-Based & High Performance Polymeric Materials**:

1. *The first continuous production by reactive processing of polylactic acid (PLA), the most industrialized bio-based and biodegradable plastic*

From Ph. Dubois' research, has emerged the first continuous production process of the most industrialized bio-based and biodegradable plastic nowadays, polylactic acid (PLA) as obtained starting from a catalytic system discovered and patented by the team of Prof. Dubois and allowing its application by reactive extrusion.

2. *The first anti-biofouling painting free of any biocide based on nanocomposite coatings cured by "metal-free" catalysis and filled with carbon nanotubes*

Prof. Dubois has developed the first "anti-biofouling" painting free of any biocide. This is a silicone nanocomposite coating adequately filled with carbon nanotubes. This painting is applied by spray on surfaces to be protected, e.g., hulls of pleasure boats or super-tanker ships, and its physical action is permanent allowing for

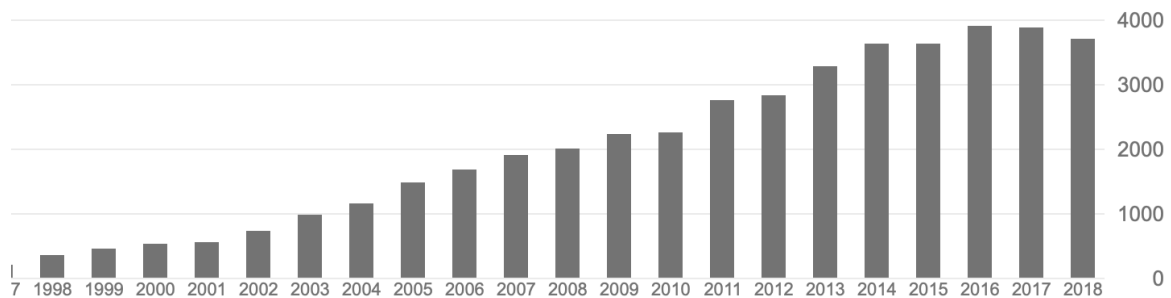
a substantial reduction in fuel consumption, in annual production CO<sub>2</sub>, and avoiding the dry-docking of vessels to unclog hulls,...

**Overall scientific contributions** (some representative figures)

- original international scientific publications: **735** (**700 peer-reviewed papers and 35 book chapters**)
- international and national patents : **70** (several led to industrial production and commercialization; 2 allowed for creating a university spin-off Cie : NANO4 S.A. : [www.nano4-materials.com/](http://www.nano4-materials.com/))
- books and scientific special journal issues (author or scientific editor): **10**
- scientific presentations at conferences (only personal contributions): **325** (plus more than 630 by coll.)
- international and national conferences: 35 personal organizations, 65 as member of the scientific committee
  
- **H-index : 96** (total number of citations : 45.200+)
- The most highly cited paper has received 7000+ citations
- PI of **121** financed research projects: 30 (international: EU, NSF), 41 (national), 50 (industrial).
- (Co)direction of 90 Master/DEA/technician theses and 61 PhD theses; supervision of 54 postdocs.

**Time-evolution of number of citations per year**

(from Google Scholar, in November 2018)



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