

**Jean-Marie RAQUEZ**

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(BELGIUM)

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Birthdate: 03/18/1977

<b>RESEARCH SCIENTIST IN POLYMER MATERIALS, SYNTHESIS &amp; PROCESSING</b>
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**EDUCATION**

**1999-2003** **PhD degree in Polymer Chemistry**, Summa cum laude, Advisor: Prof. Philippe DUBOIS, Former University of Mons-Hainaut, Belgium.

**1995-1999** **Master degree in Chemistry**, Magna cum laude, Advisor: Prof. Philippe DUBOIS, Former University of Mons-Hainaut, Belgium.

**CURRENT POSITION**

**2016-present** **Head of the Laboratory of Polymeric and Composites Materials (during the Prof. Ph. DUBOIS leave)**, University of Mons (Belgium)

**2012-present** **FRS-FNRS research associate**, University of Mons (Belgium) - Development of biobased polymeric nanocomposites with smart properties & Controlled polymerizations

**2012-present** **Scientific advisor**, Materia Nova – Research Center (Belgium) - Supervision and Management of projects relating to biobased materials

**FORMER POSITION**

**Summer 2013** **Visiting scientist**, Michigan State University (U.S.A.), Advisor: Prof. R. Narayan

**2008-2012** **FRS-FNRS postdoctoral researcher**, University of Mons (Belgium), Advisor: Prof. Ph. Dubois - Development of biobased polymeric nanocomposites.

**2007-2008** **Associated Professor**, Ecole Des Mines de Douai (France) - Reactive compounding of biobased polymeric nanocomposites at large-scale applications

**2005-2007** **Assistant researcher**, Materia Nova (Belgium) - Developing sustainable products based on pea starch for daily applications.

**2004** **Postdoctoral fellowship**, Michigan State University (U.S.A.), Advisor: Prof. R. Narayan - Development of biodegradable (nano)composites based on corn starch in blown films Applications via Reactive Extrusion Processing.

**1999-2003** **PhD degree in polymer chemistry**, University of Mons (Belgium), Advisor: Prof. Ph. Dubois – Synthesis of biodegradable poly(paradioxanone)-based polymers via Controlled polymerization

**FELLOWSHIP AND AWARDS**

**2013** Junior member of “Academie des Sciences de Belgique” (2013).

**2013** FNRS associate fellowship.

**2008** FNRS postdoctoral fellowship.

**2002** WBI travel grant – 6 month doctoral stay at Michigan State University (USA).

**GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS (ADVISOR/COADVISOR)**

**2005 – present** 7 PostDocs/12 PhDs/10 Master Students

**TEACHING ACTIVITIES**

**2017-2018** Guest Lecturer “Polymer Chemistry & Introduction” at National School of Chemical Engineering at Lille (France)

**July 2014-2017** Guest lecturer “Biobased polymeric materials” at University of Freiburg (Germany).

- 2016-now** Lecturer “Polymer Chemistry” at Faculty of Engineering - UMONS (Belgium).  
**2007-now** Lecturer “Macromolecular chemistry” at Faculty of Science - UMONS (Belgium).  
**2012-now** Lecturer “Reactive melt-processing of polymeric materials” at Faculty of Science - UMONS (Belgium).

#### **MEMBERSHIP OF SCIENTIFIC SOCIETY**

- 1999-present** Société Royale de Chimie de Belgique  
**1999-present** Belgian Polymer Group, Member  
**2007-present** Groupe Français des Polymères  
**2013-present** Alumni at Académie des Sciences de Belgique

#### **INSTITUTIONAL DUTIES**

- 2014-2016** Co-Member of Research Council at University of Mons (Belgium).  
**2012-present** Member of Department of Sciences at University of Mons (Belgium).

#### **COMMISSIONS OF TRUST**

- 2017** Member of Belgian Polymer Group Board  
**2016** Member of PhD thesis evaluation at FNRS (French speaking community)  
**2016** Member of PhD thesis evaluation at FWO (Flemish speaking community)  
**2012** Guest Editor “Biobased polymers and related materials” in European Polymer Journal (Elsevier).  
**2009-present** Various journal and grant peer-reviewing activities (e.g. Macromolecules, Carbohydrates).

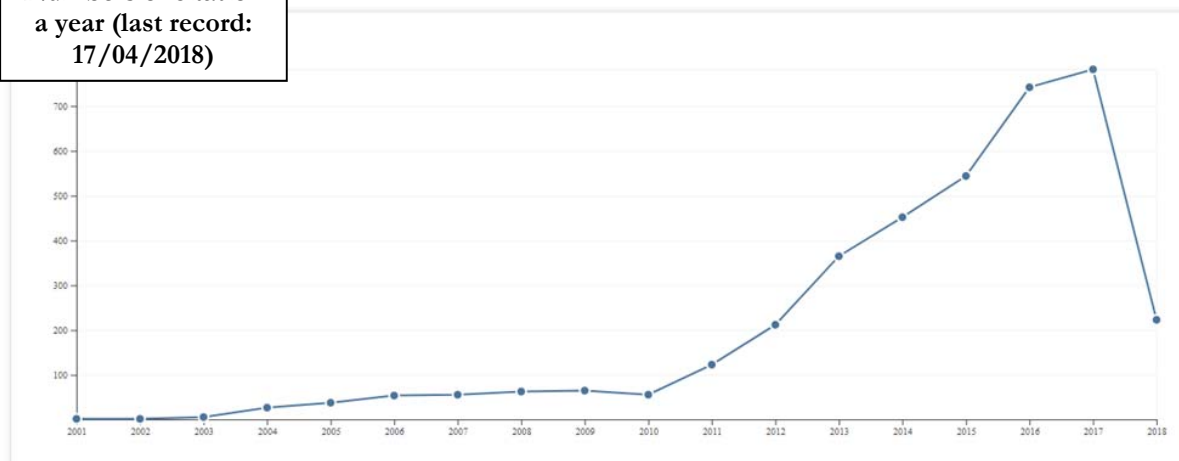
#### **MAJOR COLLABORATIONS**

- 2014** Prof. K.K. Yang – Center for Degradable and Flame-Retardant Polymeric Materials (SC Key-Laboratory) at Sichuan University (China) – Scientific collaborations in the realm of shape-memory polymers.  
**2013** Prof. Ruddy Wattiez – Department of Biology at University of Mons (Belgium) – Scientific collaborations in the design of novel renewable monomers through bacteria approaches.  
**2013** Prof. Philippe Zinck – Department of Chemistry at University of Lille 1 (France) – Scientific collaborations in the synthesis of renewable polymers using metal-free catalysts.  
**2013** Prof. Santiago Espallargas – Department of Mechanical Engineering at Delft University (The Netherlands) – Scientific collaborations in self-healing polymers  
**2011** Dr Christophe Caucheteur – Department of Engineering at University of Mons (Belgium) – Scientific collaborations in the design of optical fibers made of active polymeric systems.  
**2012** Prof. Richard Gross – Department of Chemistry at Rensselaer Polytechnic Institute (USA) – Scientific collaborations in enzymatic polymerization of cyclic esters.  
**2011** Prof. Cedric Plesse – Department of Chemistry at Cergy University (France) – Scientific collaborations in polymeric actuators.  
**2005** Prof. Alejandro Muller – Department of Chemistry at Basque Country University (Spain) – Scientific collaborations in the crystallization behavior of polymeric systems.  
**1999** Prof. Ramani Narayan – Department of Chemical Engineering at Michigan State University (USA) – Scientific collaborations in reactive extrusion processing of biodegradable polymers.

#### **OVERALL RESEARCH CONTRIBUTIONS (H-factor = 32, ISI)**

**Peer-reviewed papers:** 110 ; **Book:** 1 ; **Chapters of book:** 4 ; **Oral communications/Invited lectures:** 38 ; **Patents:** 8

Numbers of citation  
a year (last record:  
17/04/2018)



#### **Research projects under my personal supervision: 25**

17 (international : EU-H2020, EU-FP-7th, EU-INTERREG FWVL, NSF), 3 (national: BELSPO FNRS, FWB, RW), 5 (industrial)

#### **ACADEMIC ACTIVITIES**

**April 2015** Visiting professor “Biobased polymeric materials” at Sichuan University (China)

**Summer 2013** Visiting scientists at Michigan State University (Prof. R. Narayan)

**July 2012** Visiting professor at Polytechnic University of Barcelona (Spain)

#### **ENVIRONMENTALLY FRIENDLY AND BIOSOURCED POLYMERIC MATERIALS: THE KEY-ROLE OF SUSTAINABLE CHEMISTRY IN NANOTECHNOLOGY AND MATERIALS SCIENCE**

In the field of “bioplastics”, i.e., bio-based and/or biodegradable polymer materials, it includes research activities ranging from controlled and catalyzed polymerization reactions, production of high performances nanocomposites/nanohybrids via reactive processing, e.g. reactive extrusion, with applications in packaging, textile, automotive, electronic, aeronautic and biomedical domains. A special emphasis is made of biobased plastics with key-properties including shape-memory polymers and self-healing materials.