

Curriculum vitae

Dominique BEGIN (PhD)

CNRS Research Director

ASSISTANT Director of the Institute of Chemistry and Processes
for Energy, Environment and Health (ICPEES)
UMR 7515 CNRS-University of Strasbourg

Date of birth	08 April 1961
Nationality	French
Personal address	6 rue des Erables 67204 Achenheim
Professional address	Institute of Chemistry and Processes for Energy, Environment and Health (ICPEES), ECPM, UMR 7515 CNRS-University of Strasbourg 25, rue Becquerel, 67087 Strasbourg Cedex 02 Tel.: (33) 3 68 85 26 75 E-mail address: dominique.begin@unistra.fr Website: icpees.unistra.fr

RESEARCH HIGHLIGHT

Research interests dealing with the synthesis and the characterization of carbon nanomaterials (1D and 2D) - carbon nanotubes, carbon nanofibers, graphene and few layer graphene -. Association of such materials with metal oxide nanoparticles for energy and biomedical applications (contrast agent in MRI and for hyperthermic applications, Li-ion Battery).
Catalysis

EDUCATION

1990	Ph.D. Degree (Chemistry of solids) at the University of Nancy
1983 - 1985	Thesis (Chemistry of solids) at the University of Nancy

PUBLICATIONS AND DISSEMINATIONS

- 105 publications
- 175 communications (orals and posters)
- 6 invited conferences
- 7 patents (3 PCT)
- *h*-index = 23
- Advisor of 9 PhD students

ACADEMIC COLLABORATIONS

- Institute of Physical and Chemistry of materials of Strasbourg, Strasbourg (**F**)

- Institute of Charles Sadron (ICS), Strasbourg (F)
- CIRIMAT - Toulouse (F)
- LMSC, Paris Diderot (F)
- IBMC Strasbourg (F)
- INIFTA-CONICET-UNLP University La Plata (Argentina)

MANAGEMENT OF RESEARCH

- Financial coordinator of the LMSCP from 2011 to 2012
- Nanocarbon Catalysis and Interface group leader from 2013 to now
- Scientific Council member of LMSPC, then ICPEES (UMR 7515) from 2006 to now
- **Assistant Director of ICPEES since 2013**

SCIENTIFIC COORDINATOR IN COLLABORATIVE RESEARCH PROJECTS

- 2004-2008 Scientific WP coordinator of the ELCAT project (NEST) of the 6th FP
- 2011 - 2013 Coordinator of an ANR program "EMERGENCE)
- Coordinator of more than 10 french programs (ANR, IdeX...)
-

AWARDS

- Co-laureate with Izabela Janowska, Cuong Pham Huu and Marc J. Ledoux of the *Concours National d'Aide à la Création d'Entreprises de Technologies Innovantes* of the French Ministry of Research and Higher Education (2010).

SELECTED PUBLICATIONS

Carbon Nanotube Degradation in Macrophages: Live Nanoscale Monitoring and Understanding of Biological Pathway.

Elgrabli, D.; Dachraoui, W.; Menard-Moyon, C.; Liu, X.; Bégin D., Begin-Colin, S.; Bianco, A.; Gazeau, F.; Alloyeau, D.

ACS nano 9 (2015) 10113-24

Towards nanoprinting with metals on graphene

G. Melinte, S. Moldovan, C. Hirlimann, X. Liu, I. Janowska, S. Begin, D. Bégin, F. Banhart, C. Pham-Huu, O. Ersen

Nat Comm 6 (2015) Article Number: 8071

Design of covalently functionalized magnetic carbon nanotubes for imaging and hyperthermic modalities

Liu X., Marangon I., Melinte G., Wilhelm C., Ménard-Moyon C., Pichon B., Ersen O., Baaziz W., Pham Huu C., Bégin-Colin S., Bianco A., Gazeau F., Bégin D.

ACS Nano 8 (11) 2014 11290-11304

A 3D insight on the catalytic nanostructuring of few-layer graphene

Melinte, G., Florea, I., Moldovan, S., Janowska, I., Baaziz, W., Arenal, R., Wisnet, A., Scheu, C., Bégin-Colin, S., Bégin, D., Pham-Huu, C., Ersen, O.

Nat. Commun. 5 (2014) 4109

A single-stage functionalization and exfoliation method for the production of graphene in water: Stepwise construction of 2D-nanostructured composites with iron oxide nanoparticles
hiawakrim, D., Ersen, O., Melin, F., Hellwig, P., Janowska, I., Bégin, D., Baaziz, W., Bégin-Colin, S., Pham-Huu, C., Baati, R.

Nanoscale 5, (19), 2013, 9073-9080

Few-layer graphene synthesis by mechanical ablation of graphite material.

Janowska I., Romero Th., Bernhardt P., Vigneron F., Bégin D., Ersen O., Ledoux M. J., Pham-Huu C.

Carbon, 50, (2012) 3092-3116

Design of Fe_{3-x}O₄ raspberry decorated graphene nanocomposites with high performances in lithium-ion battery

Gerber O., Bégin-Colin S., Pichon B.P., Barraud E., Lemonnier S., Pham Huu C., Daffos B., Simon P., Come J. Bégin D.

J. Energ. Chem. 25 (2016) 272-277

Microwaves synthesis of Large Few-Layer Graphene sheets in Liquid-Phase

I. Janowska, K. Chizari, O. Ersen, S. Zafeiratos, D. Soubane, V. Da Costa, C. Boeglin, M. Houle, D. Bégin, D. Plee, M.-J. Ledoux, C. Pham-Huu.

Nano Research 3 (2) 2010. 126–137

Catalytic unzipping of carbon nanotubes to few-layer graphene sheets under microwaves irradiation
I. Janowska, O. Ersen, T. Jacob, P. Vennégues, D. Bégin, M.-J. Ledoux, C. Pham-Huu

Applied Catalysis A : General , 371, 1-2, (2009) 22-30

PATENTS

Procédés de préparation de graphènes

Janowska I., Pham Huu C., Ersen O., Bégin D., Ledoux M.J..

Demande de brevet Français No. 09/00100, déposé le 12/01/2009

Préparation de graphène par amincissement mécanique de matériaux graphitiques

Janowska I, Bégin D., Chizari K., Ersen O., Bernhardt P., Romero T., Ledoux M.J., Pham Huu C.

Demande de brevet Français No. 09/05252, déposé le 03/11/2009

Extension **PCT/FR** 2010/000730 déposé le 4/11/2010