

# +Composites News

Awareness and Transfer of Innovation in Composites Materials

## Happy New Year to all!



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The +Composites team wishes you joyful end-of-year celebrations!

The end of December is the perfect time to look back over the year and the events that took place, as well as to open our 2014 agendas to save new dates.

We look forward to seeing you all in 2014. In the meantime, we hope that you enjoy reading this newsletter.

### NEWS

If 2013 was an active year with many opportunities for you to meet us at events, 2014 is already promising to be a period of both transition and consolidation. Time to take out your agendas! We encourage you to participate in our future activities and to challenge us. We hope that our offer in 2014 will match your innovation needs in composite materials even more closely!

### **2013, a year filled with events**

2013 has been an active year for +Composites and its partners! Over the course of this year, we have participated in many international events as exhibitors as well as speakers and organizers.

These included **Metamorphoses 2013** in Liège, the **8th Symposium on RTM & Infusion** in Saint-Avold, and the **European Forum on careers and training in the field of composite materials** in Saint-Quentin.

Notably, we took part in **JEC Europe 2013** in March that attracted no less than 70,000 visitors, despite the abundant snowfall.



JEC Europe 2013 - Paris

The first half of the year was brought to a close with a high-profile presence at **GR Business Days in Luxembourg**, an opportunity for interaction between companies from the Greater Region (Saar-Lor-Lux).

In the second half of the year, we took part in **Composites Europe 2013** in Stuttgart, in the composite materials and automotive fair at the **Salon à l'Envers** in Thionville, then in **Aérodatings 2013** in Yutz, which was dedicated to industrial companies in aeronautics.



Composites Europe 2013 - Stuttgart

But more than our participation in major regional and international events, +Composites has been active in the field, organizing events such as professional seminars on topics including additive techniques and 3D printing, machining and assembly, non-destructive testing, thermal and mechanical characterization of composites as well as the topics of eco-design, markets and challenges in the use of composites, the financing of innovation and finally training and employment.



Job-training seminar - Saint Quentin, February 2013

You also had the opportunity to participate in visits to companies or laboratories such as LEMTA and SLCA (Lorraine), INM (Saarland), CSL (Wallonia) and IUT of Aisne.

At a time when the first Boeing 787 and Airbus A350 models are arriving on the European market, with rates of the use of composite materials in the order of 50% for fuel savings up to 20%, the number of companies interested in composite materials and their use in production is increasing every day. More of you are now getting in contact with us.

Since the beginning of the +Composites project, in less than 3 years, we've organized no less than 37 events, seminars, conferences and B2Bs, and visited 14 companies and research centers. More than 2000 of you have participated in our activities.

Finally, we have helped more than 170 companies regarding their interest in composites and analyzed nearly 40 technology transfer projects related to these materials.

In 2013, we also started publishing a series of technical articles, which you will learn more about in the next section, Behind the Scenes.

2014 will surely be a even more active year for +Composites!

## BEHIND THE SCENES

### Events

**My goal: a career in composites! (Mon objectif : un emploi dans les composites !) – Saint-Quentin, February 13, 2014**



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### **Objectives**

- Discover degree courses leading to skilled jobs in the fields of the future.
- Train for a successful job interview in this industry.
- Look for a job, a temporary contract, dual training or an internship.

### **Principle**

*The event is organized in four key stages:*

- Discover the careers: An opportunity to meet with career ambassadors. With their experience, these professionals - machine operators, fitters, production managers, R&D engineers, etc., will share information on their career and their expertise during group interviews.
- Discover the training: An opportunity to meet education ambassadors (an instructor or training specialist). This collective exchange enables you to learn about the conditions of access to qualifications and quickly evaluate your interest in a particular job in composites and the level of diploma or CQP (level 5 to level 1) required.
- Preparation for the professional interview: Two video workshops will allow you to assess and to train yourself to perform better in a professional interview and give you every chance to succeed.
- Individual appointments with companies: Take the opportunity to meet directly with business leaders with recruitment needs. Many job opportunities will also be proposed by SYNERGIE.

**+ Composites welcomes you to stand Q69 at JEC Europe 2014 in Paris from March 11-13, 2014.**

# JEC europe

COMPOSITES SHOW & CONFERENCES  
PARIS MARCH 11, 12, 13, 2014

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JEC is the largest composites industry organization in Europe and in the world with a network of 250,000 professionals from 100 different countries.

JEC represents, promotes and expands composites markets by providing global and local networking and information services.

**+Composites roundtable on cross-sectorial technology transfer**

*This event will be an opportunity to present the prospects for development and innovation offered by the transfer of know-how and technology between business sectors such as automotive, aerospace, and rail.*

*If you decide to visit JEC Europe 2014, join us on Wednesday, March 12 at 16:00 at Agora (pavillion 7.3, porte de Versailles) for our round-table event.*

## **Publications**

In June we published the first of a series of technical articles relating to the world of composite materials and more particularly to their technologies.

The first technical article is an introduction to the world of composite materials and their characteristics and presents the various matrices and reinforcement as well as markets.

The articles that follow have more technological content and include technologies and issues faced by industrial companies.

This month, four articles are already online:

[Composites: Materials of the Future - Part 1 - Introduction](#)

[Composites: Materials of the Future - Part 2: Market and market developments](#)

[Composites: Materials of the Future - Part 3 - Metal and ceramic matrices](#)

[Composites: Materials of the Future - Part 4 - Carbon fibre reinforced composites](#)

All of the versions (French, English, German) are available at [www.pluscomposites.com/publications](http://www.pluscomposites.com/publications)

## **WATCH PLATFORM ACTIVITIES**

Are you interested in what composites can offer?  
Which components made from composite materials already exist?  
In which sectors are composite materials already used?

Our Watch Platform has the answers to all of these questions.  
Today, there are **more than 600** articles online.

These articles provide an overview of what is already possible in terms of composite technologies. In addition, you will find the latest news on upcoming events in the field of composite materials.

Last but not least, a series of links will provide more information on the subject. You can access the Watch Platform through [www.pluscomposites.eu](http://www.pluscomposites.eu).

## **BUSINESS CLUB ACTIVITIES**

The Business Club is a meeting place for manufacturers seeking contacts, skills, and partners for future industrial projects. +Composites supports the Business Club in order to facilitate high level contacts.

The Business Club was launched in December 2012 and was restructured in June 2013 to be more active and proactive, to redeploy its activities in order to be closer to its members and to provide not only a service focused on international networking

centred around composite materials, but also targeted activities in the region and personalized support for members engaged in processes of change and technological innovation.

Regular meetings are held between the contact points of different regions to represent your interests and support you proactively in finding a partner or innovative projects.

More than fifty international manufacturers are currently members of the Club.

Join them by registering at: <http://businessclub.pluscomposites.eu>

## TRAINING ACTIVITIES

From the beginning of +Composites, we have been developing a series of online training modules for companies as well as professionals. These modules are divided into four levels (modules are in English or French, or available in both languages):

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Introduction/novice/advanced/expert in order to match your level of knowledge, and form three series:

Materials/processing/design, test, characterize

### Materials

COMP-001-EN [What are Composites?](#)

COMP-002-EN [Composites - Up and coming materials \(NEW VERSION\)](#)

[Introduction to materials for thermoset matrix composites](#)

COMP-004-EN

[Introduction to materials for thermoset matrix composites \(NEW VERSION\)](#)

### Processing

COMP-005-EN [Implementation of thermoset resin composites](#)

COMP-006-EN [Processing techniques for medium and large series](#)

### Design, test, characterize

COMP-003-EN [Fire Retardants](#)

These modules are available at

<http://training.pluscomposites.eu/content/e-learning>

Worth mentioning: 2 interactive modules

COMP-004-EN and COMP-002-EN have features reserved for registered users.

These modules are of course available to download by registered users.

## IN THE SPOTLIGHT

**+Composites has launched a new initiative related to design and composite materials!**



The +Composites Design Challenge aims to:

- highlight SMEs that innovate through composites
- promote the outstanding and innovative properties of composite materials and their application in the production of new products everyday
- encourage the use of composites upstream of the creation process (schools and training organizations, designers, design offices, etc.)

The competition is open to individual designers, project leaders (at business incubators, junior companies, etc.) and to SMEs (<250 employees), in 2 categories :

-Category 1 "Industrial project": Present a project with an industrial component in the creation phase (product or part of a product), whose innovative character can be used to demonstrate the value of composite materials.

Category 2 "Young creator project": The creator presents his/her project carried out individually, or with an SME - the project should be on an object used in everyday life. The design of this product should be mainly dedicated to the development of composites; it can serve as a communication tool for the promotion of composite materials.

Candidates should register and submit their project by February 28th, 2014.

## FEATURED PROJECT PARTNERS



Sirris is a Belgian industrial research centre established in 1949. Nowadays its 140 employees provide innovation and support technology transfer to 2,500 Belgian companies in the sectors of metalworking, plastics, mechanical, electrical and electronic engineering, information and communication technologies and automotive (>85% SME's). Its activity, split between R&D, information and services, is based on 6 core competences:

- Engineering of materials : innovative product concept based on optimal use of materials in specific applications. Capacities range from material tuning (ems plastics, nanocomposites) to systems conception and preseries for multimaterials injection moulding, magnesium thixomoulding and PIM (powder injection moulding) processes..
- Nanopowders and plasma : Production of ceramic nanoparticles by plasma technology, functionalisation, integration of nanopowders in industrial processes, characterisation of nanomaterials.
- Mechatronics : design and optimisation of mechatronic systems
- Technology and innovation in business processes: optimisation of product development and production organisation.
- Processing technologies: Polymers processing, composites manufacturing, metal cutting, casting, surface treatments,  $\mu$ fabrication technologies for electronic printing and micro applications.
- Rapid Manufacturing : rapid prototyping, tooling and manufacturing technologies.

The skills of SIRRIS teams in materials engineering apply also in the products and process design for composite materials.



The Chamber of Commerce and Industry of Aisne, chaired by Charles Ribe, aims to put its expertise and resources towards innovative and sustainable growth that is useful to the region. The needs and expectations of companies, whatever their size, trade or location, are at the heart of the chamber's mission. Over the last five years, CCI Aisne has been involved in developing the +Composites project to provide its citizens with operational expertise and enable them to access new markets. Anchored in national and European projects with high added value in the field of composites, it aims to confer dynamism and industrial renewal to the Picardy region. In the +Composites project, CCI Aisne is accompanied by the University of Picardie Jules Verne, the globally-oriented Industry and Agro-Resources (IAR) and i-TRANS clusters, the national competitiveness cluster UP-tex, CCI Oise, the MEF of Saint-Quentin and GRETA of Laon-Hirson-Chauny.



Dr. Catherine Macadré - Project Manager Europe  
CCI Aisne

## REGIONS

### +Composites in Wallonia

In early January, the +Composites team took part Métamorphose 2013 in Liège and later in the year in B2Lux in Marche-en-Famenne.

These two events allowed us to disseminate information on the composites market and attract the attention of many visitors on the issues regarding these products for creators and users of these materials.

These meetings have enabled many companies to initiate the process of technology transfer, accompanied by +Composites project partners.



Métamorphose 2013 - Liège, January 2013



B2Lux - March, November 2013

### **+Composites – Greater Region Business Days - Luxembourg**

An interregional event of great magnitude organized by the Luxembourg Chamber of Commerce, Greater Region Business Days is an event that allows participants to take advantage of business and cooperation opportunities in a dynamic and interactive atmosphere.

This year's event saw the participation of 178 exhibiting companies and 2,350 visitors.



The Saarland partner, INM - Kirchberg, June 2013

+Composites took the opportunity to organize a seminar on development and production by additive technique, which was attended by over 50 participants who were enthusiastic about the subject, 3D printing technology, and the high level of expertise of the speakers.

### **+Composites in Lorraine**

In February we hosted a booth at the 8th RTM & Infusion Symposium in Saint-Avold and the Salon à l'Envers in Thionville in October.

Also in October, +Composites, together with the Regional Chamber of Commerce and Industry of Lorraine and EEN, organized Aérodatings 2013, sponsored by SLCA (part of the SAFRAN group).

This event focused on a key technology: testing of the structural elements in composites.



The testing of composite structures represents about 25% of the costs of an aviation company. The more effective the testing, the less the manufactured part costs. One challenge in the aerospace sector is to optimize these technologies in order to obtain structures that are reliable and high performance.

During AERODATINGS 2013, which ended with a tour of the workshops of SLCA, a producer of helicopter and jet structures, more than 80 companies, research centers and clusters from 12 European countries had the opportunity to discover non-destructive techniques developed for the industry through technical presentations and find potential partners and initiate new collaborations during B2B meetings.

## UPCOMING EVENTS

February 13, 2014 - My goal: a career in composites - Saint-Quentin (Picardy)

Late February 2014 - Assembly of composite materials – Bruay-la-Buissière (Nord-Pas de Calais)

March 12, 2014 - Round table: Trans-sectorial innovation in composite materials - Paris (JEC Europe 2014)

March 11-13, 2014 - +Composites welcomes you to stand Q69 at JEC Europe 2014 - Paris

March 20, 2014 - Doors open & Design Challenge - Francorchamps (Wallonia)

April 10, 2013 - Agrocomposites 2014 - Saint-Quentin (Picardy)

For more upcoming events visit [www.pluscomposites.com/events](http://www.pluscomposites.com/events)

## YOUR REGIONAL PARTNERS

### Lorraine

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### Picardy

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