

CHIMIA REPORT/COMPANY NEWS

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DSM adds 3D-printing grades to Digimat to accelerate adoption of polymer additive manufacturing

Geleen, 06.11.2018 – Royal DSM, a global science-based company in Nutrition, Health and Sustainable Living, today announced the addition of four additive manufacturing (AM) grades into Digimat-AM, an e-Xstream solution awarded by JEC Innovation 2017, JEC innovation Asia 2018 and finalist of ACE Award for Composite Excellence at CAMX 2018.

The combination of DSM's high-performance AM grades with e-Xstream's accurate printing process simulation solution will allow manufacturers and end-users to identify manufacturing issues before printing their material using DSM 3D printing thermoplastic grades. Digimat-AM enables them to work on high quality materials without wasting time and cost since they avoid hundreds of trials and errors and have the opportunity to print it first time right.

"DSM is a long-term partner and now we are very excited to join forces to further accelerate the adoption of polymer additive manufacturing. Combining DSM materials' portfolio with Digimat modeling technology will allow to demonstrate the advantages of 3D printing in many applications at affordable costs", says Guillaume Boisot, Business Development Manager at e-Xstream engineering.

Nirali Surati, Product manager Additive Manufacturing Solids at DSM commented: "Additive manufacturing is quickly evolving from prototyping into mainstream manufacturing. One of the most important enablers is the capability to predict the behavior and performance of 3D printed parts in applications. Thanks to the collaboration with e-Xstream Engineering our customers now have the toolbox to design and predict reliable parts with the performance required for their application." DSM is one of the few AM material companies to offer this to their customers.

In the next Digimat 2019.0 release, the digital twins of these materials will be available as Digimat material models to perform FFF process simulation and part performance prediction in the Digimat Additive Manufacturing Solution. The addition of these grades to the Digimat material database will help engineers to optimize materials, printers and parts in a fraction of the time and cost of the traditional build and test method.

The improved accuracy provided by Digimat simulation makes it possible for DSM AM materials end-users to reduce weight, cost and time-to-market while reducing material testing and prototyping requirements.

DSM added four 3D printing grades into Digimat-AM database:

- Novamid® ID 1030, a high-quality polyamide 6/polyamide 66, whose unique properties enable parts with a good balance between stiffness, modulus and impact properties. Novamid® ID1030 is easy to print and parts exhibit excellent interlayer strength and high surface quality.
- Novamid® ID 1030 -CF10, a 1% Carbon fiber reinforced PA6/66 filament designed for printing functional prototyping and industrial parts. Its excellent mechanical properties and smooth surface appearance make it ideal for a very broad range of applications that require robust mechanical performance at elevated temperatures (HDT up to 180°C) or light weight applications in various markets
- Novamid® ID 1070, a premium PA6 with very good mechanical performance due to unique co-polymer technology. This technology offers high stiffness due to high crystallinity and very high interlayer strength for demanding robust parts in PA6.
- Arnite® ID 3040, a high-performance engineering plastics that combines high strength and impact resistance with excellent processing characteristics. With a melting point a 255°C, Arnite® ID 3040 is well suited for a broad range of automotive, electrical & electronic consumer goods applications.

"We are very excited to work with DSM on the characterization and simulation of their high performance FFF grades to answer a key challenge of today's AM industry: the need of AM-focus numerical simulation models and tools. Working with a pioneer actor of the AM industry will also help continuously improving our Digimat Additive Manufacturing simulations. This recent joint effort on AM ultimately strengthens the long beneficial collaboration between e-Xstream and DSM." – says Olivier Lietaer, Business Development Engineer for Additive Manufacturing at e-Xstream engineering.

DSM – Bright Science. Brighter Living.™

Royal DSM is a purpose-led global science-based company in Nutrition, Health and Sustainable Living. DSM is driving economic prosperity, environmental progress and social advances to create sustainable value for all stakeholders. DSM delivers innovative business solutions for human nutrition, animal nutrition, personal care and aroma, medical devices, green products and applications, and new mobility and connectivity. DSM and its associated companies deliver annual net sales of about €10 billion with 23'000 employees.
www.dsm.com

About e-Xstream Engineering

Founded in 2003, e-Xstream engineering is a software and engineering services company 100% focused on the multi-scale modeling of composite materials and structures. The company helps customers, material suppliers, and material users across many industries reduce the cost and time needed to engineer innovative materials and products using Digimat, the nonlinear multi-scale material and structure-modeling platform. Since September 2012, e-Xstream engineering is an owned subsidiary of MSC Software.

About MSC Software

MSC Software is one of the ten original software companies and a global leader in helping product manufacturers to advance their engineering methods with simulation software and services. As a trusted partner, MSC Software helps companies improve quality, save time, and reduce costs associated with design and test of manufactured products. Academic institutions, researchers, and students employ MSC's technology to expand individual knowledge as well as expand the horizon of simulation.
www.mssoftware.com

For more information:

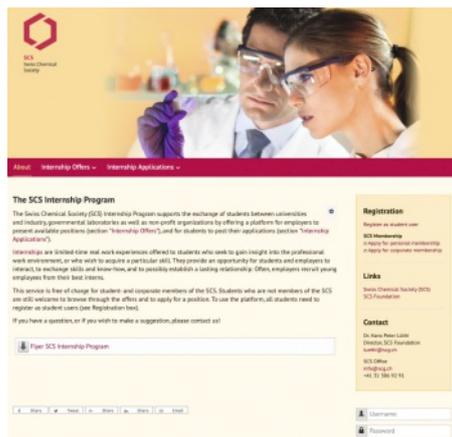
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The SCS Internship Program

The Swiss Chemical Society (SCS) Internship Program supports the exchange of students between universities and industry, governmental laboratories as well as non-profit organizations. It recently opened a portal for students to post their applications, and for employers to present available internship positions. www.internships.scg.ch is a market place for both, students and employers



Internships are limited-time real work experiences offered to students who seek to gain insight into the professional work environment. They provide an opportunity for students and employers to interact, to exchange skills and know-how, and to possibly establish a lasting relationship: Often, employers recruit young employees from their best interns.

This service is free of charge for student- and corporate members of the SCS. Students who are not members of the SCS are still welcome to browse through the offers and to apply for a position.

A visit to www.internships.scg.ch will tell you more!

How does an employer post an offer?

Offers can be made by companies, consulting firms, startups, governmental agencies or non-profit organizations interested in hiring university students as interns.

To receive a login to this portal, please send a request to info@scg.ch. Non-members first need to apply for SCS corporate membership.

To post an offer, you will need to login to the portal. When posting the offer, you will be asked to provide a number of keywords to allow the students to search for specific items (area of activity, company location, starting date and duration of the assignment). For each offer, you will have the option to set a link to an internship opportunity posted on an external source (company Web page, third party Web site).

The summary of each offer is visible to all. However, the job description and contact details are visible only to students who are either members of the SCS, or who received a login to this portal.

How does a student post an application?

Applications for an internship can be posted by university students enrolled in a BSc, MSc or PhD program. The service is free of charge for student members of the SCS. Other students, including students of universities abroad (EU and other) are welcome to use the service too; however, they need to become student members of the SCS first.

To post an application, you first need to have a login to this portal, i.e. become a registered user. After receiving clearance by the SCS office, you will be able to proceed, i.e. to fill out the application form, and to upload your application documents

Your application will be visible to all employers who are corporate members of the SCS.

What is an Internship: Q&A

What are the benefits of an internship for students and for employers?

Through an internship, a student will

- experience corporate life and culture
- obtain a better understanding of his/her role as a professional, i.e. obtain a more concrete occupational profile
- establish first professional contacts to an employer, i.e. start establishing a network outside academia

An employer, on the other hand, will

- get access to newly trained young talent
- get access to specific skills and know-how
- be able to extend the pool of candidates for the recruitment of future employees with known skills and capabilities

What kind of work will I be doing?

It is expected that the student will have exposure to “real-world problems” and will be given the opportunity to experience the corporate culture.

Do I get a salary as an intern?

Yes, the Swiss labor law requires compensation to interns even though this is part of their professional training.

Do I need to be an SCS member to apply for an internship?

No, you don't necessarily have to be an SCS member! To browse through the (complete) offers, you will have to get a login to the portal and create a user profile.

If you wish to post an application, you will have to be or become a member. Student membership is 50 CHF per year and gives you a number of other benefits.

Is the program for students of Swiss universities only?

No! Students of universities outside Switzerland are welcome to use the portal. In order to view the offers and to apply for an internship, you will need to register as a student. As a foreign student you are welcome to become a member of the SCS, which will also allow you to post an application.

Are there internships offered by employers outside Switzerland?

Most of the internships offered are for positions in Switzerland. However, many of the SCS corporate members are active globally and will therefore present opportunities abroad.

I am already enrolled in a PhD program; can I still apply for an internship?

You would have to interrupt your PhD studies to do an internship. For students who completed their doctoral studies, most companies have other programs (fellowships and other). The best moment to do an internship here in Switzerland is right after completion of your BSc or MSc studies.



www.internships.scg.ch is a resource for both, students and employers. It assists our students' transition from academic training to professional life, and it gives Swiss employers access to newly trained young talent.

The Internship Program is supported by the Swiss Chemical Society Foundation.

Until February 15, 2019:
Swiss university students are welcome
to post their applications for free!
No SCS membership required.

www.internships.scg.ch



SCS
Swiss Chemical
Society