

Katharine Smith

From: Polymer Library [polymerlibrary@ismithers.net]
Sent: 28 September 2010 14:47
To: Katharine Smith
Subject: Polymer Library Newsletter - Focus on Smart Polymers



September 2010

Rapra Polymer Library Newsletter

Dear Mrs. Smith

Smart Polymers

People who don't work closely with polymers can often associate them with mass-produced, low-cost and, sometimes, poor quality items; the word 'plasticity' has evolved as quite a negative way to describe a product.

However, these days there is a wide selection of so-called 'smart' polymers which are high-performance plastics and rubber with very clever responses to external stimuli, such as changes in temperature, pH, light or electrical or magnetic field. There are thermochromic and other chromogenic polymers which respond with a change in colour or transparency, there are polymers which emit light and polymeric composites that are conductive and there are also shape memory polymers which can be deformed, yet can later return to their original shape. With such a host of remarkable properties, polymers surely can't be considered boring, let alone cheap and nasty! The potential applications are endless; have you considered how these polymers can be utilised in your field?

In this Newsletter:

- *Selection of Items recently added to the Polymer Library on Smart Polymers*
- ***Polymer Bulletins*** available, including our ***new title - Shape Memory Polymers***.

Also from iSmithers:

- *Look again - Update on Thermochromic Phenomena in Polymers, plus the Chromogenic Polymers Bulletin are still available on combined discount*
- *Next year's Smart Polymer Systems Conference*

- Read more about the iPolyCond project which deals with Conductive Polymer Composites

Here are some interesting items recently added to the Polymer Library on Smart Polymers. Click on the links to read more...

[1067677](#) AUTONOMIC SELF-HEALING IN HYDROGEL THIN FILMS (downloadable pdf available)

In this paper on autonomic self-healing in hydrogel thin films, topics covered include...

[1067665](#) CONDUCTIVE PLASTICS: LIGHTWEIGHT AND CONDUCTIVE (downloadable pdf available)

The use of conductive polymeric compounds as substitutes for graphite and metals...

[1067423](#) ELECTRICAL AND ELECTROCHEMICAL PROPERTIES OF MAGNESIUM ION CONDUCTING COMPOSITE GEL POLYMER ELECTROLYTES

An investigation was carried out into the effects of micro- and nano- sized magnesium oxide...

[1067403](#) SHAPE MEMORY MATERIALS

The most recent advances in shape memory materials are summarised, focusing upon...

[1067377](#) SOLID-STATE LIGHT-EMITTING ELECTROCHEMICAL CELLS EMPLOYING PHOSPHOR-SENSITIZED FLUORESCENCE

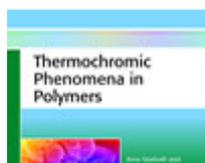
Highly efficient phosphor-sensitised solid-state light-emitting electrochemical ...

Polymer Bulletins – keep up-to-date with the latest developments

If some of the items above are of interest then why not consider a Polymer Bulletin subscription? Every two weeks we'll send you an e-mail summary of the latest news and research on your chosen topic. There's a 20% discount available on all of these topics if you sign up before 19th November 2010:

- [Shape Memory Polymers](#) - NEW!
- [Conductive Polymers](#)
- [Light Emitting Polymers](#)

Also from iSmithers:



If you haven't already seen it, why not take a look at the '[Thermochromic Phenomena in Polymers](#)' Update. It gives you an overview of thermochromic phenomena and how they arise.

To follow on from this Update, a subscription to the bulletin on '[Chromogenic Polymers](#)' will keep you up-to-date with all the latest developments in this area.

Get the Update and Bulletin together and you save £100

iSmithers' second conference on Smart Polymer Systems is taking place on 25-26 May 2011 in Mainz, Germany.

We are currently recruiting speakers, so if this is your area of expertise please consider submitting a paper. Papers on many subjects are welcome including sensors/sensing, intelligent textiles, smart coatings, biomembranes, nanoparticles and stents. [Read more](#), or send a title, short summary, speaker name(s) and company name(s) to Alix Reeves by e-mail: areeves@ismithers.net or fax: +44 (0) 1939 252416 by the deadline of **19th November 2010**.



iPolyCond

iPolyCond is based on the results of the PolyCond project which developed eco-friendly, cost effective and high added value conductive plastic composites. These composite materials protect against the effect of Electromagnetic Interference and Electrostatic Discharge and therefore have a great deal of potential. However, the benefits of these materials are not currently widely known, so the iPolyCond project aims to integrate state-of-the-art knowledge with the experience of the companies involved to develop training materials and resources. These will highlight the potential of these materials and thereby benefit the industry as a whole.

iPolyCond will embed the necessary skills within European SME converters to take full advantage of these advanced and emerging technologies. It will focus on the needs of SMEs and provide EU plastics converters with the tools and resources for effectively improving their knowledge base, competitiveness and innovativeness. **Find out more, including the resources available at www.ipolycond.org.**

Kindest regards

Rapra Polymer Library Team
www.polymerlibrary.com

iSmithers - the information business within Smithers Rapra

Tel, UK: +44 (0) 1939 252400

Tel, US: +1 330 762 7989

E-mail: polymerlibrary@ismithers.net

Don't forget, you can register your company for free and search for free in [Rapra's Polymer Directory](#).