

# **Growth Opportunities Abound for Innovative Composites**

Innovative Composites Find Increasing Application in Automotive and Other Industries - Frost & Sullivan Research

(PRWEB) February 29, 2004 --Innovative polymers and composites are dramatically broadening the range of applications and commercial production of thermoplastics. Made from both well-established and novel polymers, materials such as long glass-fibre reinforced thermoplastics, wood-plastic composites (WPC) and nanocomposites are experiencing high growth despite being relatively developmental markets.

Nanocomposites are forecast to be the highest growth market, but from a rather small base. WPCs, on the other hand, are a profit-generating market in North America although their penetration in the Europe is just beginning.

| Brian Balmer, Industry Analyst from Frost & Sullivan (http://chemicals.frost.com) explains, $\hat{A} \square$ The high cost |
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| and lack of a mass market has restrained the uptake of these materials thus far, but the WPC market is set to               |
| take hold in Europe and Asia as a growing number of extruders emulate the U.S. and adopt WPC in                             |
| construction applications. $\hat{\mathbf{A}}\Box$   |
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Since Europe lacks a decking market, WPC technology uptake will take place in a different manner in comparison with the United States. Focus will be on specialised applications and intricate products such as window profiles, skirting boards and some furniture applications.

Thermoplastic composites are expected to replace metals and thermosets in numerous applications as they offer remarkable advantages over these traditional materials. Durable, light, environmentally-friendly and chemically stable, composites also offer a myriad of possibilities in terms of optimising materials to suit applications. This adds further to their attractiveness.

LFT is one of the fastest growing plastics industry sectors and automotive applications account for over 95 per cent of the worldwide demand. In Europe, an annual growth rate of 10-12 percent was observed during the period 1999-2002.

| $\hat{A}\Box$ The automotive industry is the main driver for the European long fibre reinforced thermoplastic (LFT) market, which has been expanding faster than other LFT markets, $\hat{A}\Box$ notes Balmer. $\hat{A}\Box$ New applications include under body panels, front-end modules, and door panels. $\hat{A}\Box$  |
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| Acceptance of nanocomposites has been relatively slow despite the initial promise of $\hat{A} \Box a$ dream material for the 21st century. $\hat{A} \Box$ Nevertheless, the market is expected to pick up rapidly in the near future. While carbon nanofibres and nanotubes are currently under development, nanoclays are already finding applications in high barrier resins for food packaging and in some automotive applications. |

 $\hat{A}\Box$  Ongoing R&D efforts, growing demand for conductive compounds, miniaturisation of electronics parts, improvements in processing machinery and the development of new applications will open more avenues for these materials,  $\hat{A}\Box$  adds Balmer.

Continuous product improvement and innovation hold the key to the further development of innovative



composites. As globalisation and consolidation increase, developing new markets, both in terms of new end users and geographic expansion, is crucial. Lowering cost bases, speeding up innovation, and building expertise will help LFT suppliers to attract/retain automotive end users. Companies also need to enhance their customer services, and technical support.

In the WPC market, participants are increasing marketing budgets to raise awareness and adhering to building industry standards to expand revenues. Licensing, formation of strategic partnerships, and acquisition can help new companies build market share.

In the meantime, nanocomposites suppliers are focusing on developing new products through the compounding process. Efforts are on to toughened nylon nanocomposites for injection moulding and high-viscosity nanocomposites for blow moulding. Research is also on to advance polyolefin-based nanocomposites.

If you are interested in a summary of this research service which provides industry participants an overview, summary, and challenges in the European Market for Innovations in Thermoplastic Composite Technologythen send an email to Katja Feick  $\hat{A} \Box$  Public Relations Manager at katja.feick@frost.com with the following information: Full name, Company Name, Title, Contact Tel Number, Email. Upon receipt of the above information, the summary will be emailed to you.

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