



# NOVEMBER 2007

## NCC OPENS NEW SMC CENTER OF EXCELLENCE AT WEST DAYTON CAMPUS

The National Composite Center (NCC) announced it has established a new Sheet Molding Compound (SMC) Center of Excellence at its Dayton Campus for Advanced Materials Technologies (DC-AMT). The new center will allow NCC specialists to mix up some new "recipes" for an old technology to help manufacturers expand market applications and achieve lower operating costs.



**NCC's DC-AMT, site of new SMC Center of Excellence**

The SMC Center is expected to be set up and fully operational by early 2008. In addition to looking at materials that include nano particles, bio resins and high strength fibers, NCC will develop efficient scale-up processes for the innovative combinations. Yet the new chemistries and process developments will target traditional SMC manufacturing systems eliminating the need for companies to recapitalize.

The new approach, which will leave the end product and molding equipment used to produce SMC sheets looking relatively the same, will focus on expanding the market by changing the chemistries or materials used in SMC processes and the way these materials are combined. The development production model to be used will examine individual "ingredients" like nano-particles, higher modulus glass, bio resins and bio

fibers and how these elements might enhance the physical property requirements of performance characteristics like viscosity, specific gravity, aging and fiber loading capability.

New materials developed by NCC will have to meet current manufacturing specifications. Prototype SMC sheets will be produced on a 36-inch SMC line, submitted to a cure analysis system and a surface analyzer for surface reflectivity. Testing formulations against standard methodologies and part requirements is expected to demonstrate critical performances such as modulus, tensile strength and surface quality and enhancements such as better cure times.

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## NEW MEMBER COMPANIES BRING SPECIALIZED RESOURCES AND PROGRAMS TO NCC

The Center for Leadership & Executive Development (CLED) at the University of Dayton (UD), Ross Group Inc., and Nanospense LLC have joined NCC's Member Program bringing specialized resources to the Center's cluster populations. CLED has joined at the partner level and will offer NCC incubator companies a significant discount to its Emerging Leader or Successful Supervisor programs.



CLED is a partnership between leading organizations and the nation's top thought

leaders in executive development. Its' mission is to provide customized educational programs and services tailored to address the needs of its partners and to develop leaders.

CLED's The Emerging Leader program is a yearlong leadership and business skill development program

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With a new crop of materials and processes to use, the SMC industry will have the opportunity to expand its market reach, enhance process efficiencies and produce lower mass products.

“In addition to developing technologies capable of providing repeatable, reliable part quality, we’ll have the capability to analyze work

being done in other countries to help make processes here in the US more robust,” said Harry Couch, Senior Technical Consultant for NCC.

“With its network, NCC is really a consortium of companies. The ability to tap government, academic and industry knowledge and equipment gives us a much wider source for possible solutions, something the majority of

manufacturers don’t have available to them.” See the full feature article about NCC’s new SMC Center and its plans in November’s issue of Reinforced Plastics Magazine.

For more information about the new Center email Dwight Rust at [drust@compositecenter.org](mailto:drust@compositecenter.org) or Harry Couch at [hcouch@compositecenter.org](mailto:hcouch@compositecenter.org)

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for high potential future executives in corporate, government and non-profit business organizations.

In addition to experiential leadership and development training using local, regional and national thought leaders and top UD School of Business professors as facilitators, the program includes multiple assessments, networking with other high potential leaders, executive coaching and a formal mentoring program.

CLED’s Successful Supervisor programs target the needs of new and experienced supervisors, managers, and individual contributors from companies of all sizes. For more information about CLED email Robert Smith at [smithrof@udayton.edu](mailto:smithrof@udayton.edu) or Jackie Priser at [priserja@notes.udayton.edu](mailto:priserja@notes.udayton.edu).

The Ross Group, a new NCC member company, is headquartered in Dayton with offices in Cincinnati and Atlanta, Georgia. Ross Group Inc is a proven technology leader, enabler, and solution provider for a wide range of industries.



Ross Group Inc  
*Solutions for a Data Intensive World*

The company provides software product lines and technical support services that have helped hundreds of organizations

meet their business growth and ROI goals.

For the NCC population, the Ross Group will be able to help companies harness the power of custom databases for composites, a resource tool that until now has been difficult for composite manufacturers to create.

The Ross Group’s Enterprise Database services include consulting for database projects, on-location staffing through DBAOnSite® and 24 X 7 “Live” DBA remote support through DBAOnCall®. RossAssured offers round the clock proactive database monitoring, alerts and maintenance. E-Business and web application development services offer custom application development while RossAssured Managed Services gives

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## NEW MEMBER COMPANIES BRING SPECIALIZED RESOURCES TO NCC *Continued From Page 2*

affordable support for proactive monitoring, alerts, maintenance, web dashboard, reporting and more to provide NCC companies with worry free IT availability. For more information email Gary Codeluppi at [gary.codeluppi@rossgroupinc.com](mailto:gary.codeluppi@rossgroupinc.com)

Nanosperse LLC has also joined as an NCC member company. NanoSperse works closely with technology developers and end users to speed the process of innovation throughout the supply chain. NanoSperse licensed technology for dispersion of nanoparticles in January



2004. The technology was developed jointly by the Air Force Research Laboratory located at Wright-Patterson AFB (WPAFB) and the University of Dayton Research Institute (UDRI).

NanoSperse maintains a close partnership with UDRI as a primary commercialization pathway for emerging nanocomposites technology.

NanoSperse is scaling up its dispersion technology using manufacturing equipment funded by The State of Ohio Third Frontier initiative. The NanoSperse business was created to bridge the gap between nano particle manufacturers and end users. NanoSperse acts as a commercialization pathway of choice for emerging nanocomposites technologies by providing end customers with world class design and development capabilities and assured supply of scaled-up nanomaterials. For more information email Arthur Fritts at [afritts@nanosperse.com](mailto:afritts@nanosperse.com)

## TOM MELIA IS NAMED NCC EMPLOYEE OF THE QUARTER

Tom Melia has been named Employee of the Quarter. Melia is facilities coordinator for the Center was given the honor for third quarter 2007.

Melia's hard work and dedication was found to exceed the NCC Values Statement which covers integrity, innovation, collaboration, education,



**Tom Melia**

individual growth and business growth.

On behalf of NCC, Melia will be recognized in NCC's Reception Area, enjoy three months of premium parking, and a gift certificate. The NCC staff congratulates Melia for his commitment.

## NCC & QUICKSTEP PRESENT PAPERS, NCC GENERATES LEADS AT ACMA TRADESHOW

NCC and Quickstep exhibited at the American Composites Manufacturers Association (ACMA)'s COMPOSITES & POLYCON 2007 tradeshow. NCC

presented papers on nanotechnology and thermoplastic composites. At the trade booth, NCC showcased Quickstep, Rapid Fiber Preforming and thermoplastic

technologies – capabilities that generated high interest among visitors. A number of qualified leads were generated.

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## NCC & QUICKSTEP PRESENT PAPERS, NCC GENERATES LEADS AT ACMA TRADESHOW

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In collaboration with University of Alabama at Birmingham (UAB) NCC also featured the new lightweight thermoplastic composite A/C bus door in the product category of the tradeshow's People's Choice Award competition.

This exposure generated additional interest and leads. As the only

nonprofit total economic development solution for the advanced materials industry in the US, NCC specialists talked with visitors about the Center's commercialization and manufacturing acceleration capabilities.

NCC is able to lead companies from concept to testing and trouble shooting, state-sponsored scale-up, prototyping,

product testing and training of personnel once new manufacturing equipment and techniques are established. NCC also provides services that make it possible for companies to sample its technologies, raw materials – many of which are not yet commercially available - and equipment without the upfront investment.

