

BREAKTHROUGH INNOVATION TO TRANSFORM THE PROCESS INDUSTRIES



We are forming public-private partnerships to define future U.S. industry as well as to develop the next generation of modular, process-intensified innovative manufacturing processes.

► PURPOSE

- Research, develop and demonstrate new technology for modular chemical process intensification
- Deliver dramatic reductions in energy, capital and operating cost
- Make U.S. Manufacturing and our workforce more competitive

► VALUE

- Integrate, optimize and accelerate promising technologies from early research in foundational PI science through pilot scale
- Significantly reduce capital and operating costs
- Demonstrate step change improvement in energy efficiency and energy productivity
- Provide test beds for practical demonstrations, affirming new technology, such as modular systems, integrated unit operations, and functionalized membranes
- Develop a process intensification science and technology database and toolbox
- Educate and train your current and future workforce
- Share knowledge of PI science and technology among industry, academia, and national labs
- Combine and leverage resources to validate and benchmark potential process improvements

ENABLING TECHNOLOGIES FOR PROCESS INDUSTRY

Modeling and Simulation Focus Area	<ul style="list-style-type: none">• Process Simulation• Model Based Technology Scale Up• Process Control
Intensified Process Fundamental Focus Area	<ul style="list-style-type: none">• Novel Energy Sources• Alternative Separations• Catalysis and Novel Chemistry
Modular Manufacturing Focus Area	<ul style="list-style-type: none">• Materials — Lighter and Less Expensive• Modular Components Manufacturing• Microchannel Reactors & Heat Exchangers

INDUSTRIAL APPLICATIONS

Chemical & Commodity Processing Focus Area	<ul style="list-style-type: none">• Chemical Manufacturing• Oil & Gas Processing• Pharmaceuticals & Specialty Chemicals
Natural Gas Upgrading Focus Area	<ul style="list-style-type: none">• On-Site Natural Gas Upgrading• Distributed Fuels & Chemicals Production• Light Gas Separations
Renewable Bioproducts Focus Area	<ul style="list-style-type: none">• Pulp & Paper• Distributed Bio-refining• Water Remediation

MEMBER BENEFITS

- Access to Facilities
- Access to Educational Resources
- Access to Tools, Models, and Process Intensification Technology
- Networking with Fellow Experts in Process Intensification
- Participation in Boards And Councils
- Participation in Roadmapping
- Participation in Projects

For More Information Regarding Membership Into The Rapid Institute,
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