



NanoDynamics ^{Inc}™



Presented at
NanoEquity Europe 2006

"The Power of Nanotechnology"™

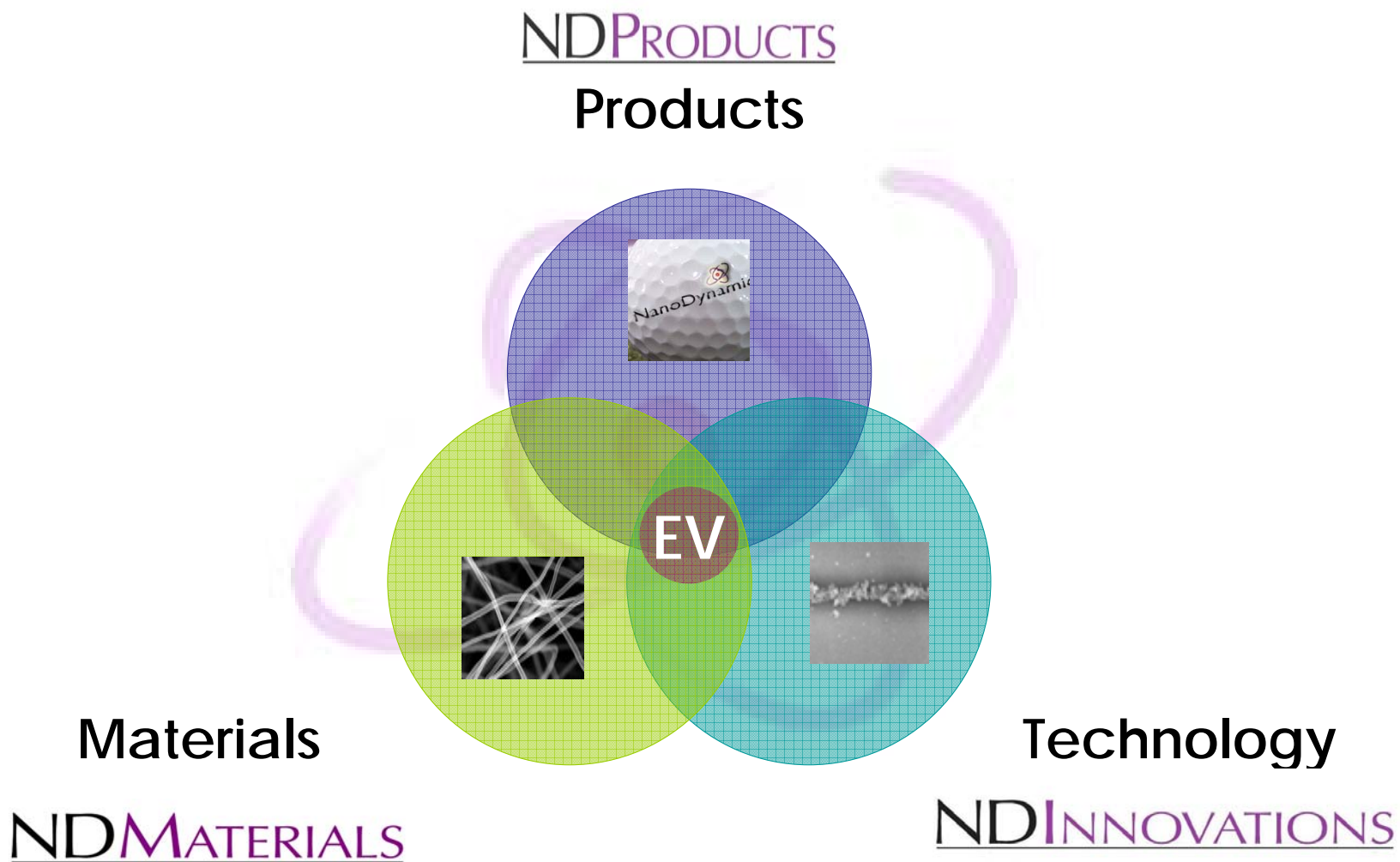


NanoDynamics is a fully integrated technology and manufacturing company utilizing nanoscale engineering to commercially address some of the world's biggest challenges. With nanotechnology solutions for issues ranging from energy, water, and national security to opportunities for improved medicine, electronics, transportation and consumer products, NanoDynamics is committed to delivering the Power of Nanotechnology to the global marketplace.

Corporate Background

- Launched in 2002 by executives with an average of over 25 years experience in advanced materials, manufacturing technology, and the financial markets
 - Management and advisors include executives from DuPont, Ford Motor, Cookson, Fahnstock, Grumman, Carborundum, Bekaert, Monster.com, and others
- Three financing rounds to date - \$45 MM raised almost exclusively with private (non-VC) equity
- 100 employees in three locations, 15 PhDs
- Focused on commercial applications of nanomaterials, nano-intermediates, and nano-enabled products

NanoDynamics Business Model



ND INNOVATIONS

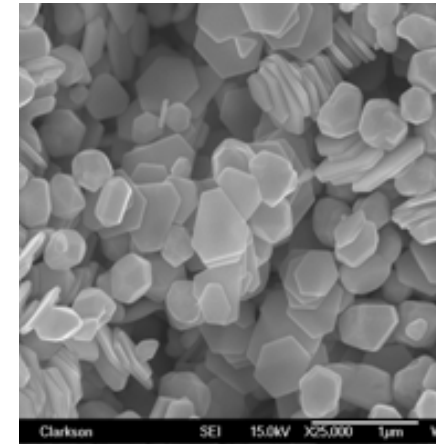
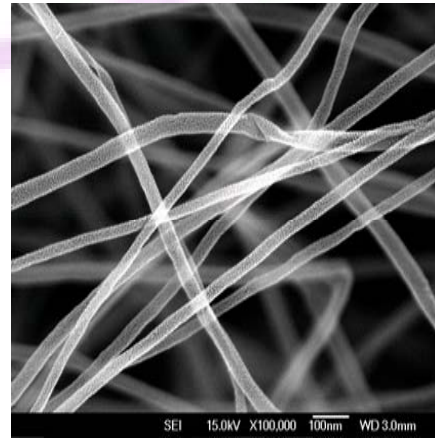
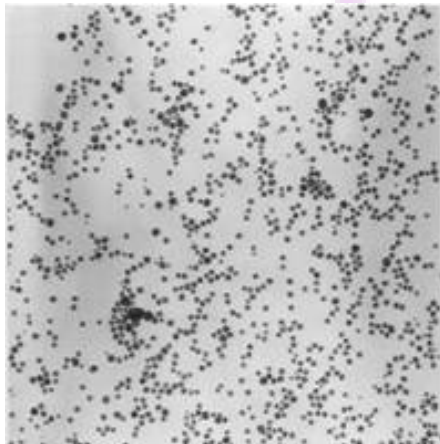
- Finding, acquiring, developing, protecting, and monetizing technology
 - University research
 - Government grants
 - Internal R&D
 - Industrial partnerships
 - Licensing
 - Joint ventures



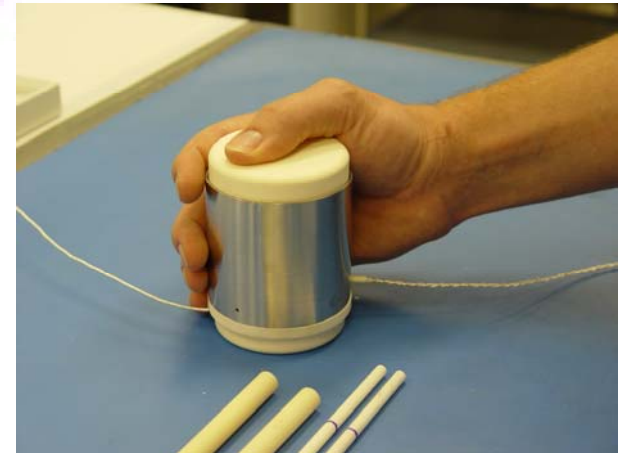
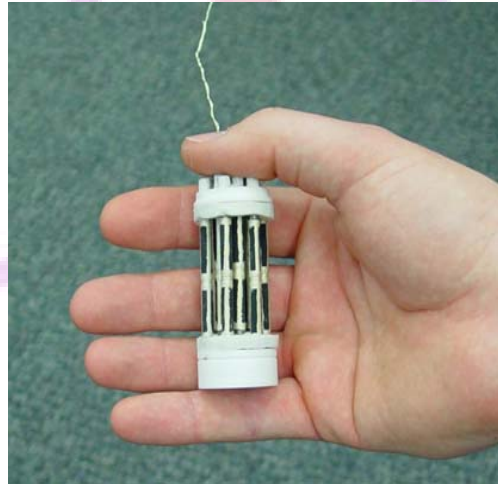
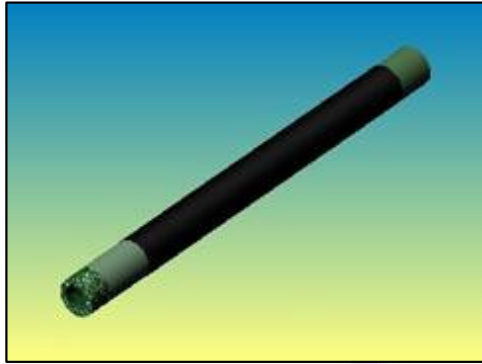
ND MATERIALS

Metals and metal alloys
Ceramics
Carbon
Polymers

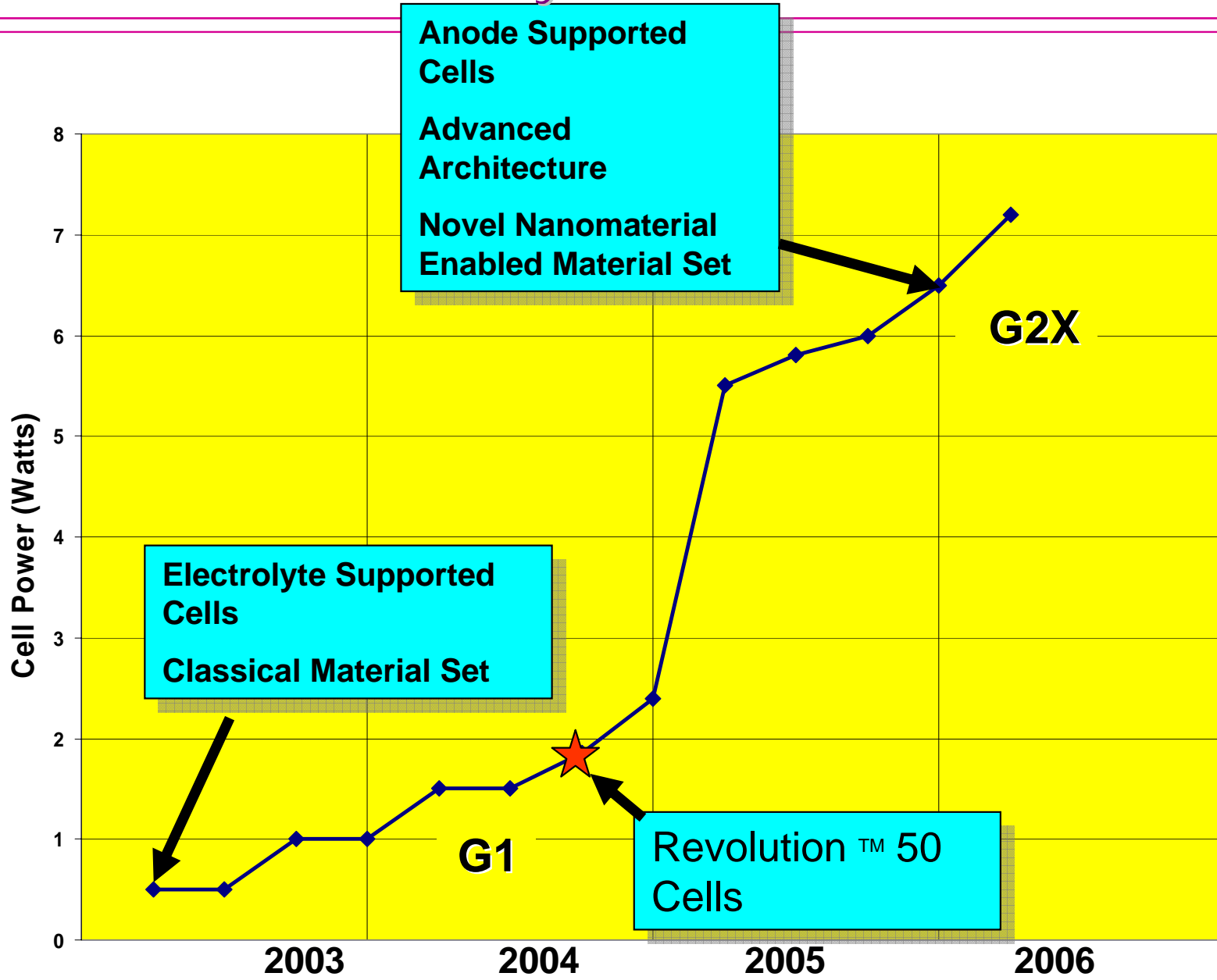
Powders
Dispersions
Flakes & Platelets
Nanotubes



ND PRODUCTS



NanoDynamics' Fuel Cell Evolution



- Portable 50W / 12 VDC (Regulated)
- Propane Fuel
- Commercially Available Fuel Cylinder
- Microprocessor Controlled
 - LED Display
 - Simple Customer Interface
 - Regulated DC Output
- Hybrid Configuration

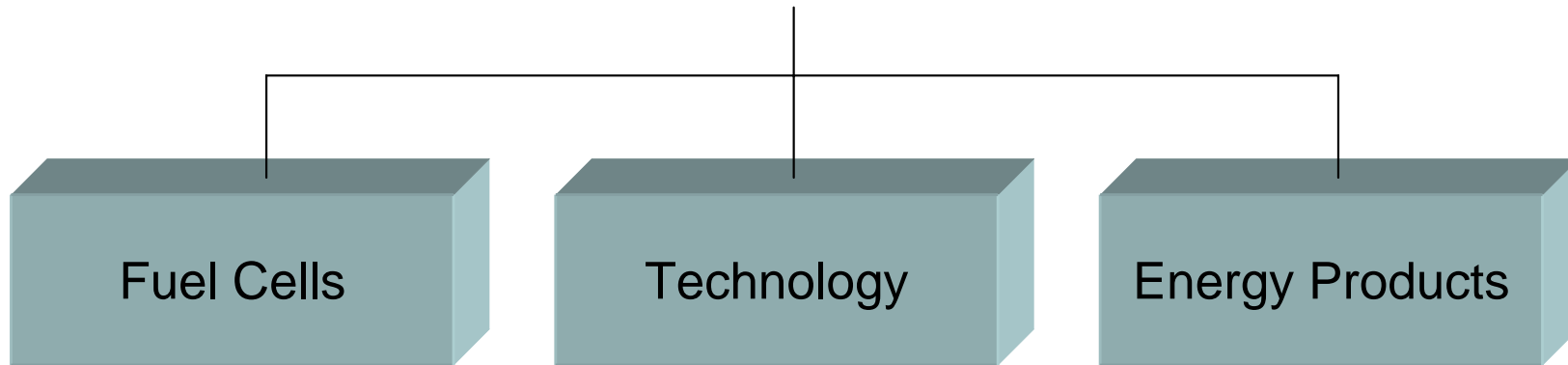


Program Status:

- Continuing Refinement of Microprocessor Control & Power Management System and System Package - Production Scheduled for Q4 of 2006

Revolution Led to Evolution

NanoDynamics Energy Inc.

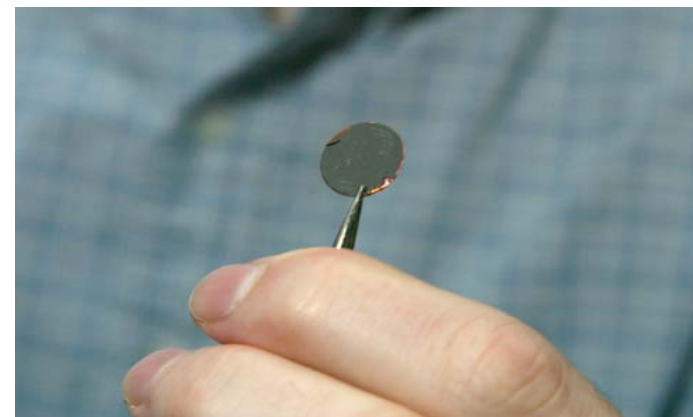


NanoDynamics Inc.

"The Power of Nanotechnology"™

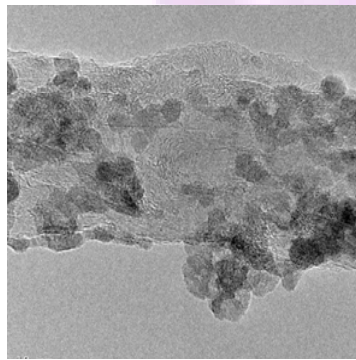
- Leverage established technical and manufacturing strength in advanced materials and nanotechnology to develop commercial opportunities in the energy sector
- Develop and sell proprietary materials to fuel cell, battery, photovoltaic, capacitor, and other energy companies
- Establish strategic partnerships and joint ventures with leading energy companies to reduce time to market
- Accelerate product development of fuel cells for portable and residential applications
- License intellectual property where applicable (biodiesel, ethanol, catalysis, etc.)

- **Energy Production**
 - Fuel Cells
 - Thermoelectrics
 - Photovoltaics
- **Energy Storage**
 - Batteries
 - Ultracapacitors
 - Hydrogen Storage
- **Transmission & Conservation**
 - High Temperature Superconductors
 - Catalysts
 - Thermal Fluids
 - Process Intensification

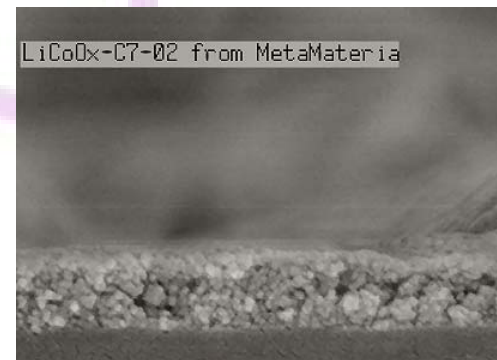


- Fuel Cells
 - Revolution-50 portable fuel cell systems
 - 250 watt propane and diesel fueled systems
 - Small (< 3 kilowatt) residential CHP systems for Japan, Korea, China, India, and Eastern Europe
 - Medium (> 5 kilowatt) methane-fueled cells and stacks
- Batteries
 - Thin film batteries
 - Lithium ion batteries
- Superconductors
 - Superconductive coatings
- Ultracapacitors
 - Nanofilm and nanotube-based capacitors
- Thermoelectrics
 - Bulk nanostructured thermoelectrics
- Photovoltaics
 - Internal development efforts
- Process Intensification
 - Biodiesel
 - Cellulosic Ethanol
 - Ionic Liquids

- Advanced lithium ion batteries use \$600 MM of graphite anodes per year
 - Tin-doped CNTs offer significant performance advantages in lifetime, charge and discharge cycles
- Nanosized and structured lithium cobaltate and lithium titanate cathode materials showing exceptional promise for next generation batteries

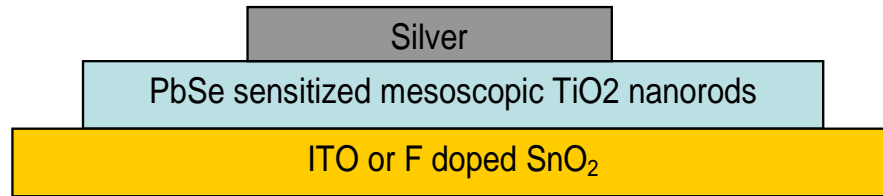


Sn CNT

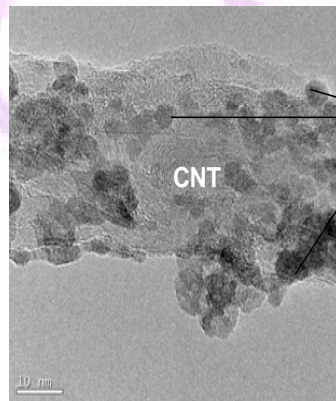
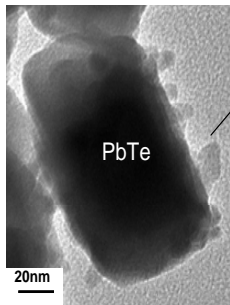
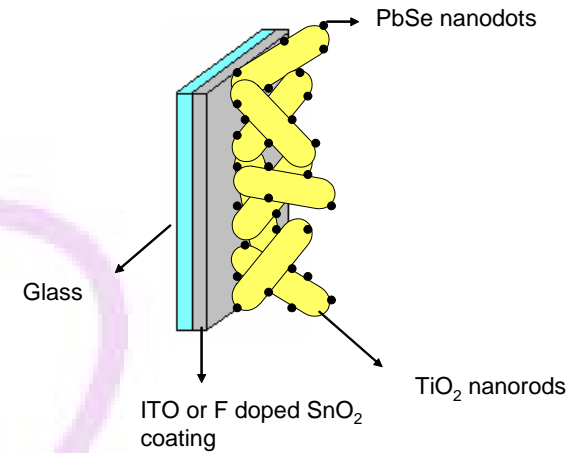


Cathode Coating - Battery

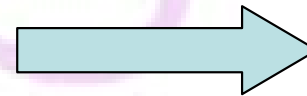
Quantum Dot Sensitized Solar Cell



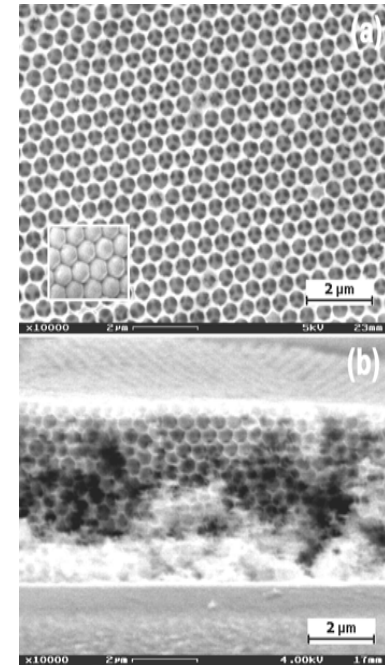
Cell Based on Nanorods



Sn

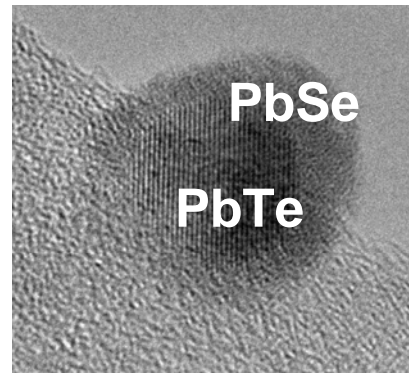


Mesoporous TiO₂ at Rutgers



Examples of embedded particles made by MetaMateria

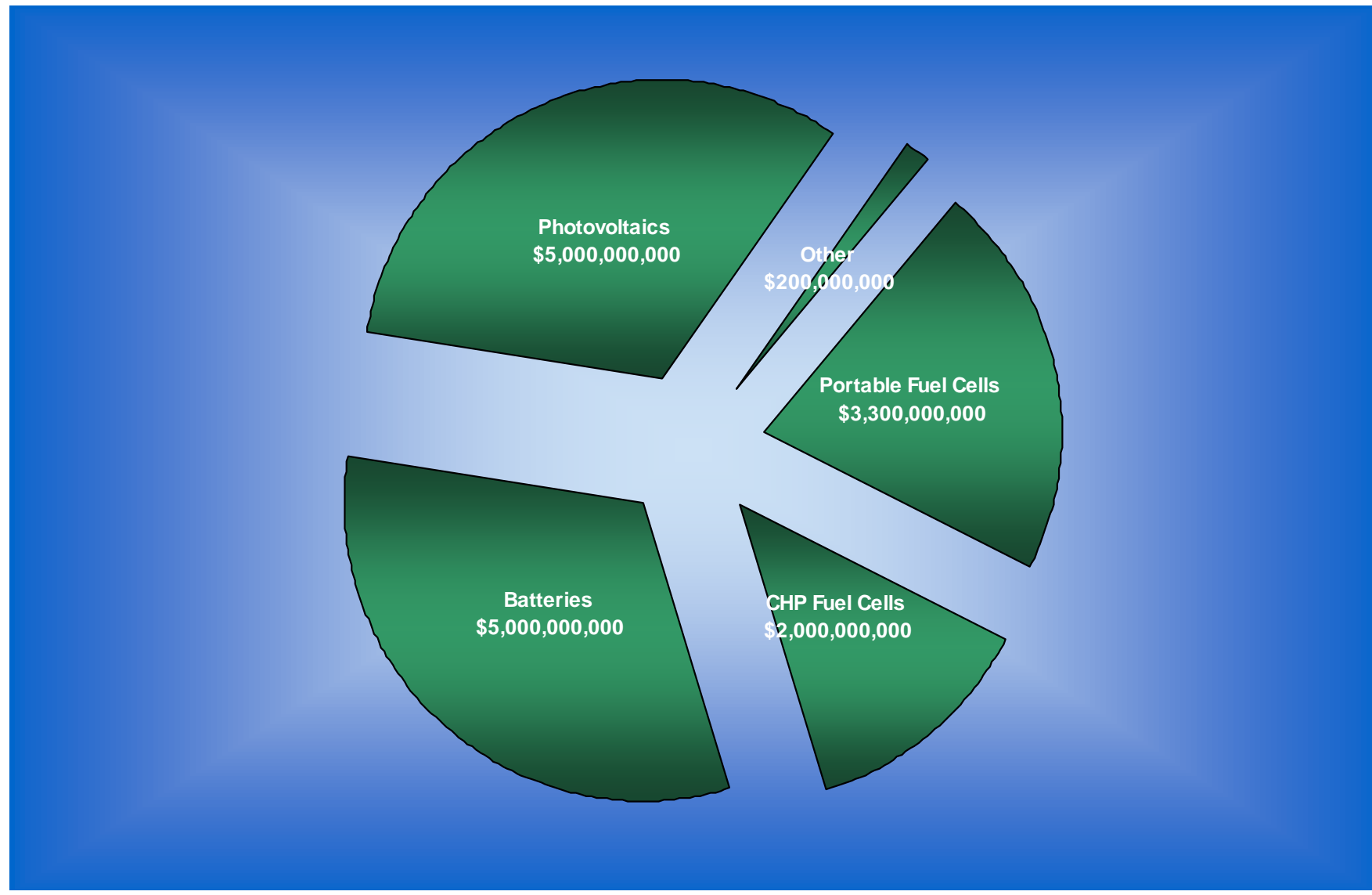
- Nanostructured core-shell materials hold promise for achieving unprecedented efficiencies in direct conversion of waste heat to electrical energy
- Applications include automotive cooling systems, refrigeration, supplemental industrial power generation, and many others

20 nm Core-Shell

Product Pipeline

Product Area	R&D	Feasibility	Pilot	Commercial
<i>Revolution Fuel Cells</i>				2007
<i>Battery Materials</i>			2006	2007
<i>Thermoelectrics</i>		2006	2007	2008
<i>Photovoltaics</i>		2007	2008	2009
<i>Ultracapacitors</i>		2006	2007	2008

2008 Market Summary - \$15 billion and growing



Public Comparables

Name	Symbol	Focus	2005 Revenues	Operating Income	Market Cap
Medis	MDTL	Fuel cells	\$0.5	< \$18 >	\$ 968
Altair Nanotech	ALTI	Materials	\$2.8	< \$10 >	\$175
Plug Power	PLUG	Fuel cells	\$14	< \$48 >	\$ 525
Energy Conversion	ENER	Batteries, PV	\$86	< \$25 >	\$1,600
Ballard Power	BLDP	Fuel cells	\$54	< \$94 >	\$ 730
Evergreen Solar	ESLR	Solar	\$44	< \$20 >	\$ 700
SunPower	SPWR	Solar	\$79	< \$13 >	\$1,800
Valence Technology	VLNC	Batteries	\$11	< \$28 >	\$ 180
Average			\$ 36	< \$32 >	\$ 835

All figures are \$ MM

- The impact of nanotechnology on the Energy sector will be significant in the next three to five years
- Near term opportunities in fuel cells, battery materials, thermoelectrics, and photovoltaics are projected to drive significant revenue and profit growth at NanoDynamics Energy, Inc.
- NanoDynamics Energy's strong IP and nanomaterials position, experienced management team, and commercial orientation will make it a leader in the application of nanotechnology to solve energy issues of global importance



NanoDynamics IncTM

*"The Power of Nanotechnology"*TM