

Paraclete Corp.

**MANUFACTURER OF
THE FIRST 100% ROOM TEMPERATURE
nc-Si SOLAR PV PRICED BELOW GRID POWER
AND
SURFACE FUNCTIONALIZED GROUP IVA
NANOPARTICLE MATERIALS AND INKS**

Paraclete's Objective for this Forum:
Attain Resources, Relationships and Strategic Paying Customers
in order to meet the goals described herein

www.paracleteenergy.com

22nd NREL Industry Growth Forum
November 2009

THE Paraclete GENESIS

Vision → Business → Science → Industry & Academia → TODAY

CONSTRAINTS

- No Heat
- Room Temp
- Proven c-Si
- Dist. Micro Mfg Plants
- No CVD
- Low Energy

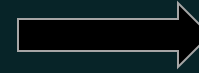
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LOW CAPEX - >10x

LOW OPEX - > 2x

Bring
PV Mfg & energy
to developing regions
worldwide & compete
globally

Ex-Situ
process



Materials

- (air stable) nc-Si
- Commodity chem



Process

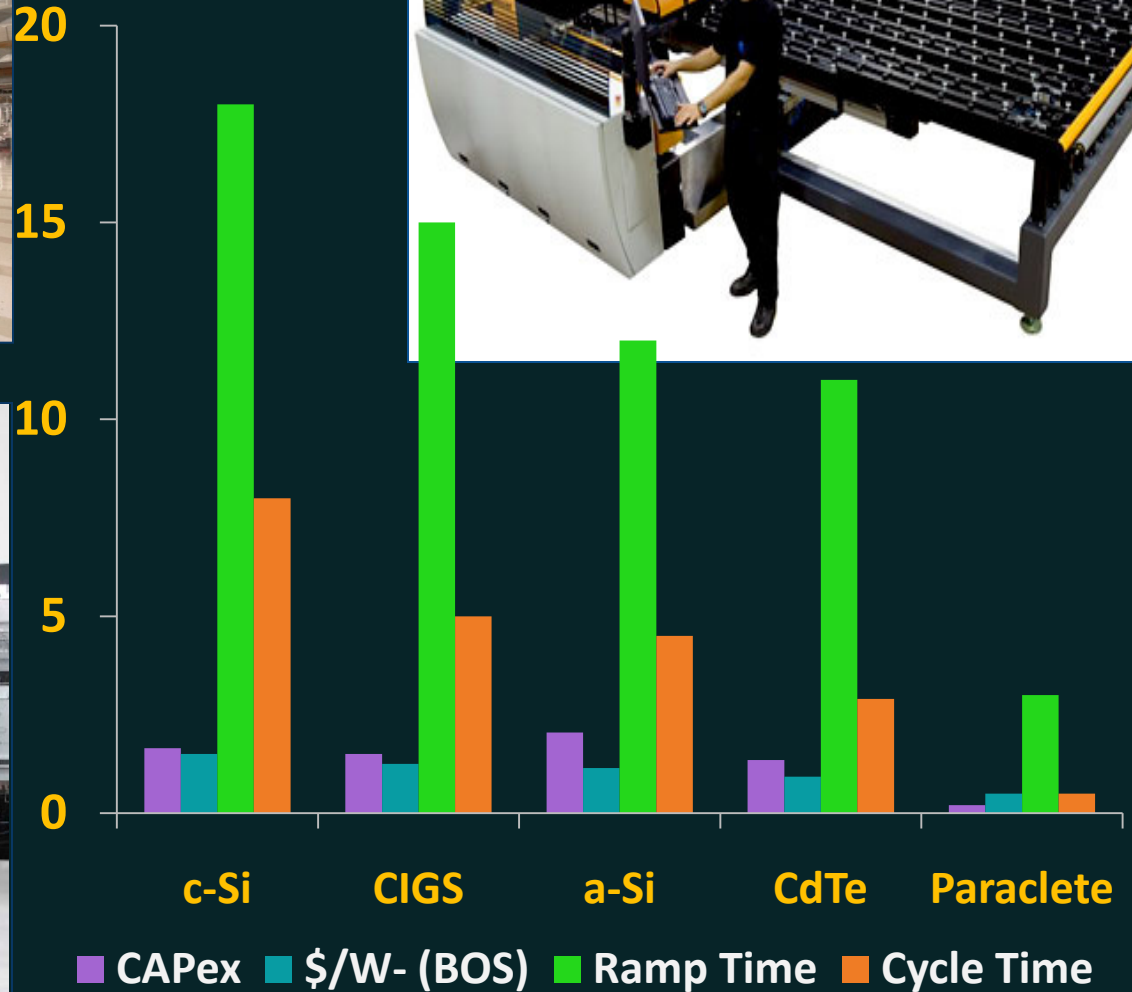
- Low cycle time
- Air Atmosphere
- No sintering & CVD
- Plant Ramp Time



Architecture

- Nano Particles
- Printing
- Monolithic
- Micro Mfg Plants

Δ Mtl. Science = Δ Paradigm



Paraclete's PV HYBRID TECHNOLOGY

"First Generation" Semiconductor Wafer Technology

Solid-State

"Third Generation PV"

Organic

A-, poly-, c-Si, CdTe, CIGS

Thin Films

Nanoparticle quantum conf.

Monolithic printed layers

Sintering min. ~400 °C

PV Effic.: 5 – 19%

Paracleteenergy

nc-Si
Hybrid PV matrix
charge carrier

Economic Advantages

- **100% Room Temp = Lowest Cost (>10x)**
 - \$0.20 vs. >\$2.00
 - \$0.50/W vs. >\$1.00/W
 - <\$0.10/kWhr
- **Printed nc-Si enables:**
 - High Si Efficiency
 - Flexible & Distributed Micro Mfging
 - Low Cycle Times (**30 min. vs. 3 – 8 hr**)

polymers

Thin Film

Tunable bandwidth

Low cost

Low efficiency

ROADMAP TO SUCCESS: The Team

Paracleteenergy

INDUSTRY

Customers
Funding
Printed Electronics
Turnkey Engineering
System Integrators
Energy Companies

ACADEMIA



Management

Jeff Norris Pres. & CEO

- IPO experience – (77:1 & 8:1)
- E&Y Entrepreneur of the Year
- Multiple patents
- Started career at DEC

Engineering

L. Matthews
EE., Mat'l. Sci. & Eng.

Sales

B. Czubko
ME
Entre. – M&A

Science

T.D. Newbound
Ph.D., Chemistry
S. Mehta
Ph.D., Mat'l Sci.

IP 100% Owned by Paraclete

ROADMAP TO SUCCESS: NanoMtl Milestones

NanoMaterials Growth Model

Series A

~\$1.5 MM

- Specific Strategic Paying Customers
- Indirect Channels
- **Build Reputation: Execute and Deliver**
- **Revenue to Help Fund Solar PV Business**



\$2 MM (Paraclete funded)



\$rev

Multiple \$Exit



Novel Properties

- *Ex-Situ* production = Air-stable
- Functionalize to specifications
- Tunable Dielectric properties
- Ease of scale-up

Benefits

- Eliminates Large CAPex
- Enables “Out of Line” Production
- Flexible or rigid substrate
- nc-Si = High perform. transistors

Available for sale today!

ROADMAP TO SUCCESS: Solar PV Milestones

Commercialization
Development



Engineering

Commercial
PV modules
on rigid sub.

Partnership
for flexible
substrate



(DOE / NREL-SAI / SBIR / DARPA / NASA)

Multiple \$ Exit



Strategic
Alliances

System Integrator
Product Development
& Pre-paid Pilot

3-5 MW Pilot
Manufacturing
Plant

Use of Funds 18 – 24 Months

Resourcefully work multiple angles towards a common goal

Series A ~ \$1.5M

- 50% Labor & Materials
- 20% Equipment
- 15% OH, Travel & Rent
- 15% Other

Sources of Other funds

- +\$3M - \$5M
- Non-dilutive, Non Equity
- DOE/Alliances/Prefunding & Revenue
- Series B (if required)

Sales and Gross Profits

Year	2010	2011	2012	2013	2014
Revenues	\$125K	\$550K	\$2M	\$18.3M	\$41.3M
EBITDA	(\$750K)	(\$990K)	\$200K	\$5.8M	\$13.2M

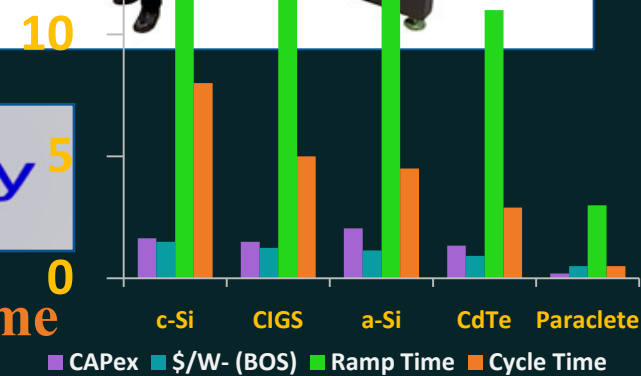
INDUSTRY BARRIERS vs. Paraclete



VS.



Paracleteenergy



Right technology – Right time

Strong Team: Capable, Highly Motivated, Experienced & Resourceful

Pragmatic, Achievable Business Plan but with Huge Upside

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