



brilliant
LIGHT POWER

Business Update
(Parts Redacted)

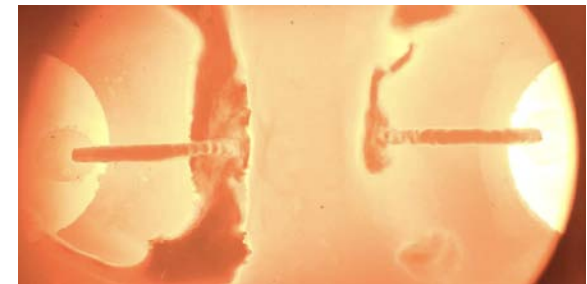
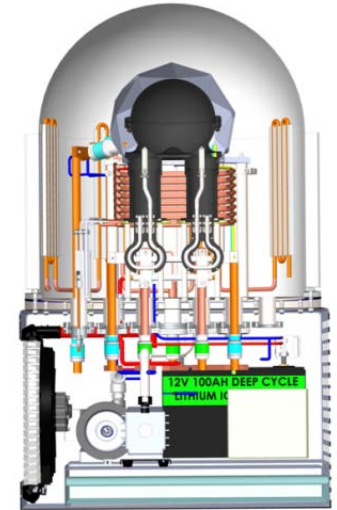
August 2017

Safe Harbor Statement

This presentation contains forward-looking statements, including statements regarding the company's plans and expectations regarding the development and commercialization of our technology. All forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. The forward-looking statements speak only as of the date of this presentation. The company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any such statements to reflect any change in the company's expectations or any change in events, conditions or circumstances on which any such statements are based.

SunCell Light (power) Source Progress

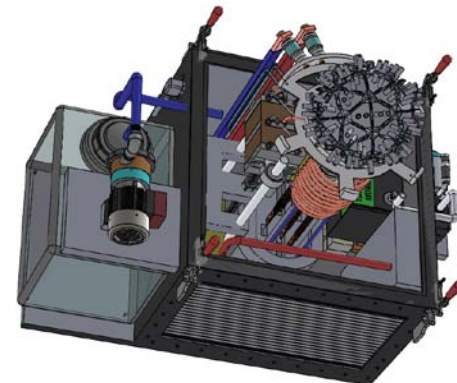
- The SunCell light (power) source has overcome key engineering challenges in prototype development.
 - ✓ Antenna design to control temperature profile
 - ✓ Automated antenna disassembly, retraction, and storage post startup
 - ✓ Automated molten metal level controller
 - ✓ High temperature and pressure ceramic to metal, molten metal ignition system seals
 - ✓ Automated injector alignment system
 - ✓ EM pump design to improve pumping power and eliminate magnet heating by inductively coupled heater
 - ✓ Design to prevent cell and injector melting
 - ✓ Injector design to assure molten metal stream intersection
- ⑩ The SunCell commercialization engineering mature enough to be outsourced to Columbia Tech, Boston MA



SunCell enabling solutions are not routine engineering;
constitute blocking intellectual property

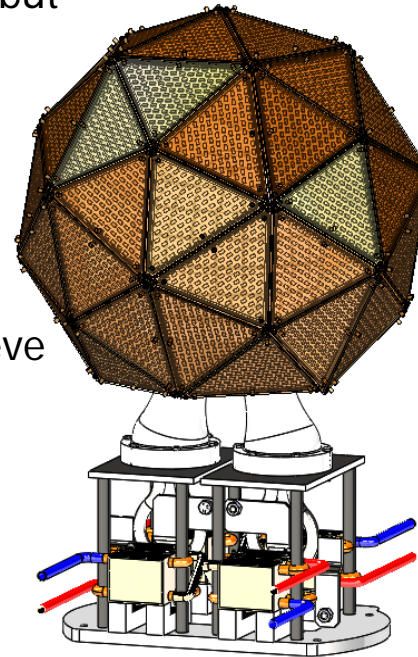
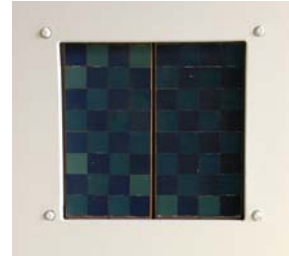
SunCell Heat System Design Commencing

- BrLP has engaged TMI Climate Solutions to develop system concepts and solutions for thermal applications with SunCell Light (power) source
- Assignment is for two designs:
 - 500 kW thermal radiant boiler for a 3000K blackbody radiator
 - 500 kW thermal radiant boiler for a blackbody radiator at a temperature that is optimal for commercialization using existing optimal systems
- TMI Climate Solutions provides an experienced development partner
 - Parent firm MiTek, a Berkshire-Hathaway company, with revenues estimated at \$1.6B (St Louis Business Journal Apr 27, 2017)
 - TMI provide manufactures and delivers the best custom solutions available today for worldwide applications.
 - www.tmiclimate solutions.com



PV Development Progress

- Path forward based on systems analysis:
 - Si technologies are best choice; widely available
 - Si-ideal band gap of 0.84 eV at the ideal operating temperature for cooling of 130°C (Cooling technology readily exists)
 - Si paradoxically becomes more efficient at higher temperatures, due to collecting more of the 3000 K blackbody radiator light
 - Larger radius PV shell reduces system to 300-500 Suns
 - Larger radius PV shell reduces cost; 10X more cells are required, but lower cost of cSi cells, overall systems cost reduced along with development risk
 - Light recycling leads to higher efficiency
- Efficiency estimates are well within business plan ranges for SunCell
 - 1J silicon solar cells operating at elevated temperatures can achieve over 20% efficiency
 - Light recycling estimates 40-50% efficiency feasible
 - Reduced cooling system complexity
 - Cost feasible at \$60 / kW in production volume



PV Development Progress

- Multiple vendor proposals in development
- System design now enables robust, commercially available PV

Si PV Cell Company	Working on Si PV cell company contract for cSi. 18 years of CPV field experience
FFC 1	Fortune 500 Company (FFC1), working on contract for III-V 3J cells on InP substrate.
Microchannel Company	Off-the-shelf PV cooling system (DRA in house). Working on contract through FFC1 and FFC2.

PV – FFC1

- Scope:
 - Modeled photovoltaic cell that is optimized to convert energy as efficiently as possible from SunCell black body radiator
 - Considered *mature photovoltaic* material systems with an emphasis on the III-V compounds that are currently used to manufacture multi junction PV and CPV solar cells
 - Light recycling supported by InP
- Conclusion:
 - Coarse band gap modeling defined benefit of multi junction structures. 3J structure yields 4% absolute benefit relative to 2J structure. 2J is 7% absolute higher than 1J
 - Chose 1.3/0.96/0.73 eV lattice matched structure on InP
 - Precision modeling results indicate 29.5% for chosen 3J structure
 - 36% cell efficiency at concentration (Efficiency decreases to 29% at 100C operating temperature, but cooling system and parasitic loss issues are favorable)
 - Light recycling could significantly increase efficiency (study in progress)

6 month development effort for III-V 3J cells on InP substrate

PV - Si PV Cell Company

- Working on development contract for cSi
- Background:
 - Based in USA
 - 18 years of CPV field experience,
 - 8 generations of product evolution
 - 29-30% system efficiency (31-33% module, 40% production cell)
 - Deployed solar energy technology has been rigorously field-tested at locations throughout the southwestern United States and Spain

PV –Microchannel Company

- Plan to have work on project in conjunction with FFC1 and FFC2
- Background:
 - R&D team focused on Concentrated Solar PV (CSPV)
 - World-first, pre-commercial solar PV pilot using central receiver concentrator (200kW, \$3.6M funded)
 - Photovoltaic system requires just 1/1000th of the photovoltaic material and 50% the solar collector area to produce the same amount of power as standard conventional solar panels



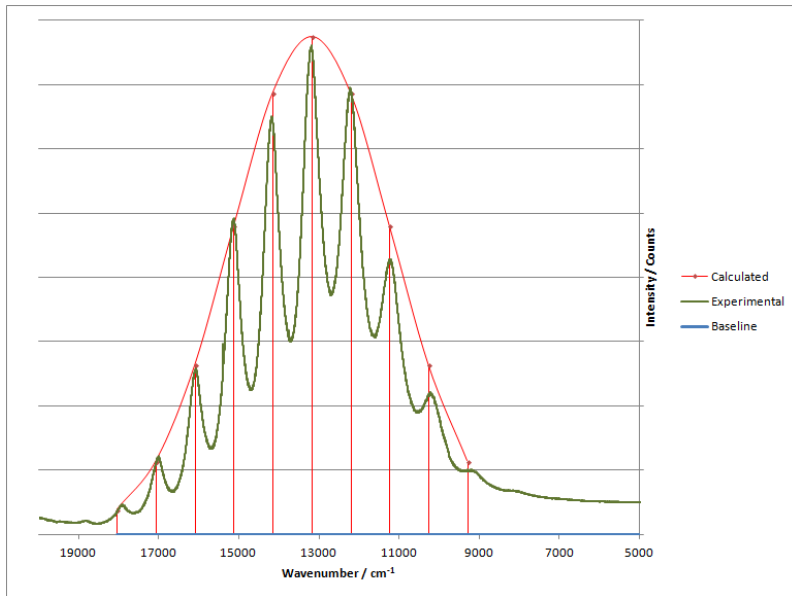
SunCell Next Generation Breakthrough Potential

- Direct power extraction (DPE), emerging technology to directly convert thermal & kinetic power to electrical power

Validation

- Gold standard method of measuring power and energy balance of single hydrino fuel pellet ignition achieved using NIST calibrations and shunt circuit to overcome interference from electromagnetic pulse
- Results show 20 MW peak optical power as unique signature of a high energy continuum emission spectrum
- Results show energy gain of 200 to 500 times
- New paper to be published in noted science journal demonstrating methods for measuring power and gain from Hydrino® reaction optically and thermally using state of the art instruments
- Hydrino products identified by multiple analytical methods
- Foundation for National Labs experiments and conclusive proof of “better than fire” energy source
- Supports the SunCell® Automated Cell demonstration by showing the potential massive power density and gain of the hydrino power source that can be harnessed into applications by the SunCell with optimization
- Commercial and academic validation in progress

Methods for measuring Hydrino® product



- GUT
- Molecular modeling
- H(1/2) and H(1/4) hydrino transitions observed by continuum radiation
- Astronomy data verifying hydrinos such as H(1/2), H(1/3), and H(1/4) hydrino transitions
- H(1/2) hyperfine structure
- H₂ (1/4) XPS binding energy

- H₂ (1/4) ro-vib spectrum in crystals by e-beam excitation
- H₂ (1/4) FTIR
- H₂ (1/4) Raman
- H₂ (1/4) Photoluminescence spectroscopy
- Fast H in plasma including microwave and rt-plasmas
- Rt-plasma with filament and discharge
- Afterglow
- Highly pumped states
- H inversion
- Power with multiple solid fuels chemistries
- SunCell® energetic plasma
- ToF-SIMS and ESI-ToF identification of hydrino hydride compounds
- Solid H NMR
- H (1/4) spin-nuclear hyperfine transition
- Electricity gain over theoretical in CIHT cells

Validation of Energy Gain by leading experts

<http://brilliantlightpower.com/validation-reports/>



Dr. Peter Jansson, Associate Professor Department of Electrical and Computer Engineering, Bucknell University, PhD from University of Cambridge, BA from MIT. Dr. Jansson has expertise in the research and development of electric power system fundamentals, sustainability, new energy technology systems, renewable and advanced electric power systems, smart grid technology, electronics, and hybrid/electric transportation and grid storage.



Dr. Randy Booker, Professor of Physics, University North Carolina Asheville, PhD and MA from Duke University, BA from Rice University. Dr. Booker has served as Physics Department Chair at UNCA. Dr. Booker reviewed the theoretical work of Dr. Mills in addition to validating spectroscopy and calorimetry experiments.

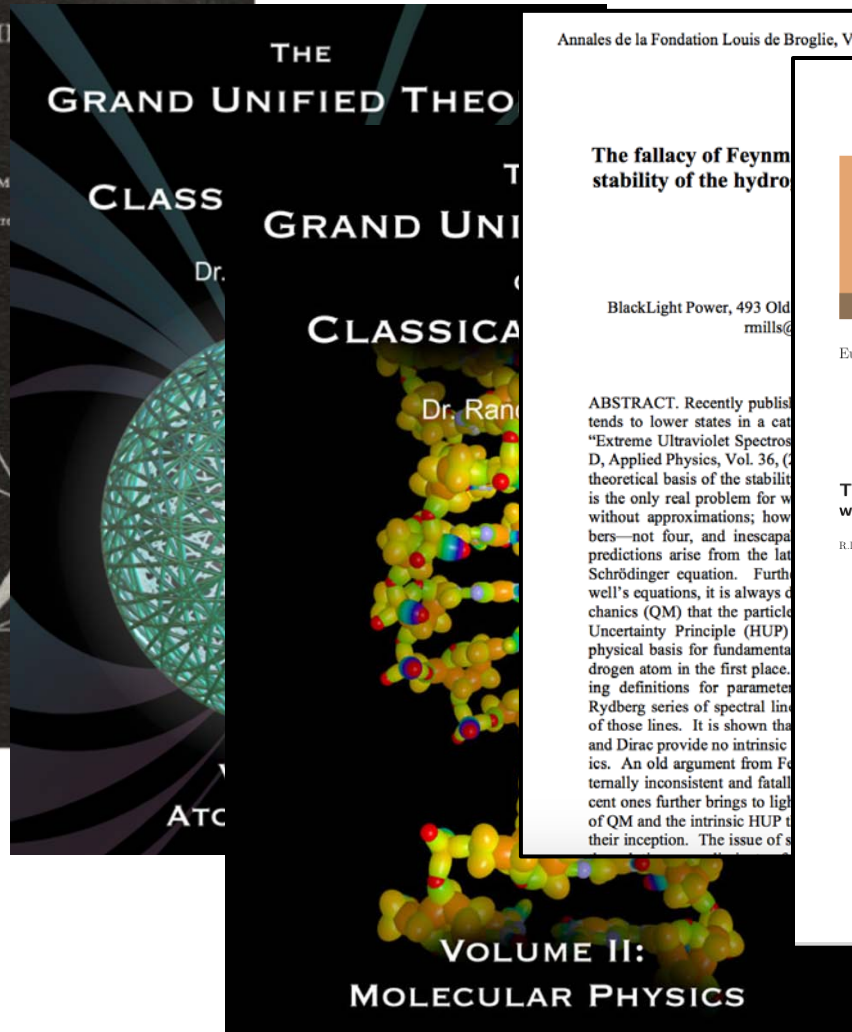
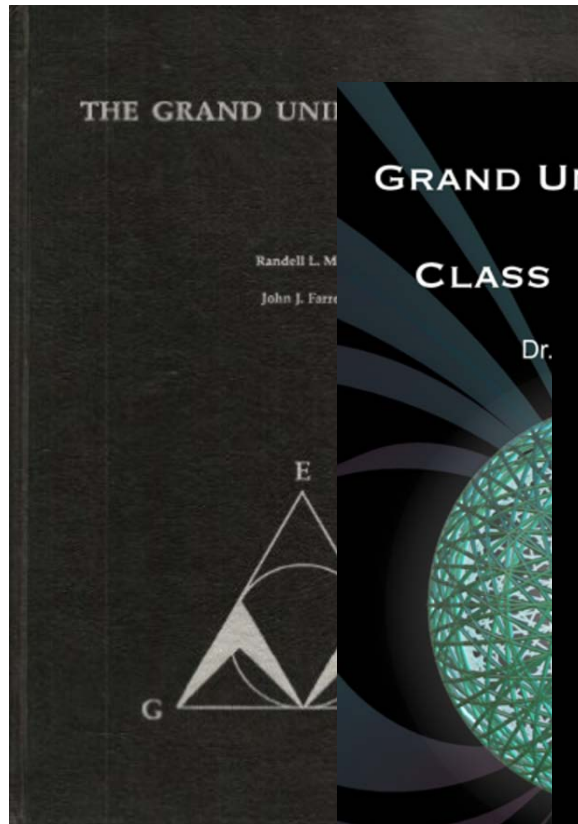


Dr. K. V. Ramanujachary (Chary), Professor Department of Chemistry and Biochemistry, Rowan University. Chary has extensive expertise in materials science and collaborates with world renowned battery and materials science groups. Chary participated in prior independent validation studies measuring energy from solid fuels and validating Hydrino[®] containing chemical samples.



Mr. Joe Renick, former Chief Scientist for a Defense Contractor. Over 20 years experience at all levels of Research and Development in including managing test and evaluation programs for tier one defense contractors, DTRA and other agencies. Mr. Renick conducted BrLP solid fuel validation programs at third party sites for a prior employer in addition to Solid Fuel and SunCell[®] tests at BrLP.

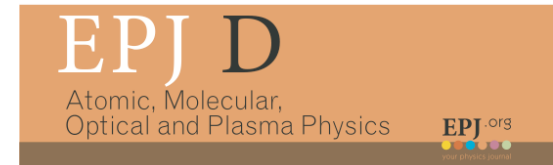
Beyond the over 100 peer reviewed publications, a new important paper to publish in July regarding the confirmation of the fundamental Hydrino reaction, the SunCell's power source



The fallacy of Feynman's stability of the hydrogen atom

BlackLight Power, 493 Old Mills Road, San Francisco, CA 94118
 rmls@blacklightpower.com

ABSTRACT. Recently published by Feynman, the hydrogen atom tends to lower states in a catastrophic manner. This is the "Extreme Ultraviolet Spectroscopy" problem. The theoretical basis of the stability of the hydrogen atom is the only real problem for which there is no solution without approximations; however, there are not four, and inescapable predictions arise from the late Schrödinger equation. Furthermore, Dirac's equations, it is always classical mechanics (QM) that the particle's position is uncertain (HUP) physical basis for fundamental constants. The hydrogen atom in the first place. The Rydberg series of spectral lines of those lines. It is shown that the Dirac equation provides no intrinsic solution. An old argument from Feynman is internally inconsistent and fatal. The recent ones further bring to light the fallacy of QM and the intrinsic HUP to their inception. The issue of s



Eur. Phys. J. D 64, 65–72 (2011) DOI: 10.1140/epjd/e2011-20246-5

Time-resolved hydrino continuum transitions with cutoffs at 22.8 nm and 10.1 nm

R.L. Mills and Y. Lu



BlackLight Innovations, Inc.

- Water as high power density, fast kinetics safe fuel (non-sensitive) to develop high pressure for for mining, road construction, propellant, and other commercial applications
- Program:
 - Support validation and public announcement of hydrino-based power source
 - Pursue commercial partners-Defense Co. license contract in place to perform government contracts
 - Very small scale prototype reactions successful



Recent Media Coverage

- June 13, 2017 NJBiz: New Jersey's Top Research Centers:
<http://www.brilliantlightpower.com/wp-content/uploads/pdf/NJBizLists-Research-061317.pdf>
- May 31, 2017 Huffington Post: Futurist Dr. Randell Mills Talks SunCell, Off-Grid Power, And The Future Of Job Creation:
<http://www.huffingtonpost.com/entry/592ec431e4b07c4c73138706>
- May 31, 2017 Philosophystorm.org: His Majesty the Electron: <http://philosophystorm.org/ego-velichestvo-elektron>
- September 12, 2017 Presentation scheduled for SCTE (Society for Cable and Telecoms Engineers) Energy 2020 Meeting, Denver CO



Thank you!

For more information please visit us at www.brilliantlightpower.com