Characterizing Brown's Gas

Outline of this Presentation

History/Leading Researchers

What is it?

Physical Properties

Theories

Points of Interest

Current/Future Applications

Questions?

Brown's Gas Important People

Yull Brown:

Discovered the gas and attribute the unusual properties to what he called “Fluid Crystal”

Until his death in 1998, he was considered the world’s foremost expert on the gas.

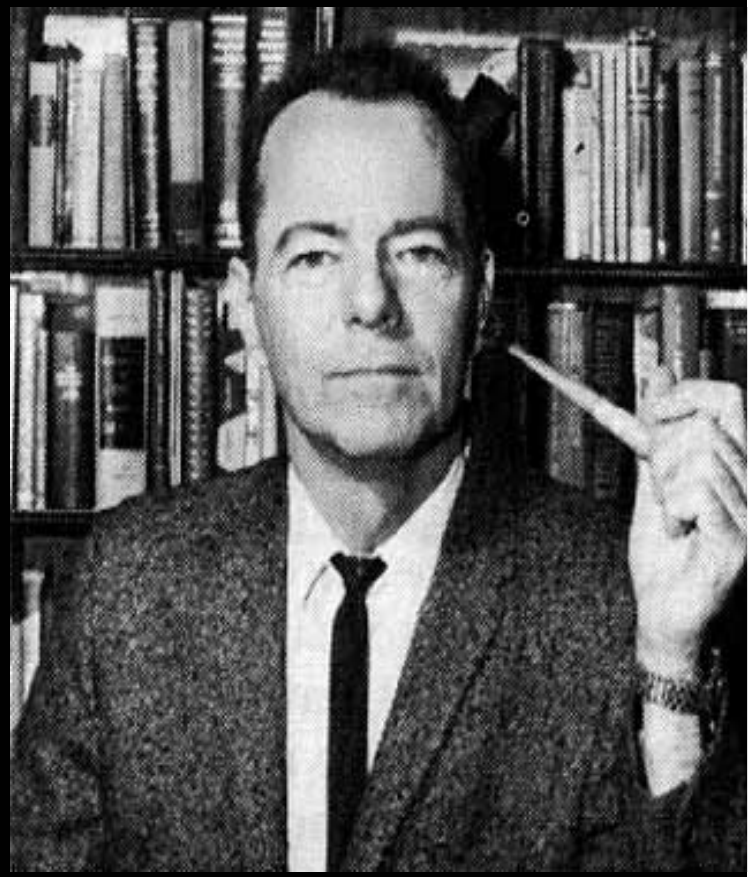
Picture Found at:

http://keelynet.files.wordpress.com/YullBrown.jpg

Brown's Gas Important People

Dr. William Rhodes:

In the early 1960's, Dr. Rhodes received two U.S. patents for methods of producing this unique gas



Picture Found at:
www.hydrogen-gas-savers.com/william-a-rhodes.htm

The patent was known as 'single-ducted gas' because all the gas came out of one hose instead of two.

Brown's Gas Important People

George Wiseman:

Started Eagle Research, an independent firm leading the way in Brown's Gas research

His company produces lectures, literature and actual devices for Browns Gas and other energy areas

ER1200 WaterTorches have been independently proven to be more efficient than any known electrolyzer

Picture Found at:

http://keelynet.files.wordpress.com/2008/01/wiseman.jpg

Brown's Gas Important People

Dr. Ruggero Santilli:

He had come up with the theory of magnecules bonding, which may help explain Browns Gas

He wrote an article: “A New Gaseous and Combustible Form of Water” to help explain odd features of Brown’s Gas

Picture Found at:

www.magnegas.com/company_corp.html

and http://peswiki.com/images/d/df/DrRugeroSantilli_in_lab_200.jpg

What is Browns Gas?

"The entire mixture of gasses evolving from an electrolyzer that splits water and is specifically designed NOT to separate the gasses". George Wiseman

Physical Properties

Brown's Gas Has:

- Cool flame, around 130 degrees F, can reach temperatures as high as or higher than 5000 F
- Will burn in a vacuum
- Has an electron density slightly more than water
- Has a calculated energy of around 15K joules in one liter
- 5 millirems more then background radiation
- Needs very little energy to ignite the flame and can ignite without a spark

Picture Found at:

http://www.waterfuelconverters.com/Videos/ Or WaterTorch.com

Browns Gas Target Material

A flame of Brown's Gas applied to:

- Tungsten: Burns to Tungsten Oxides with some Tungsten ~5,000 C
- Gold: Melt/boil to vapor ~2,950 C
- Ceramics: Burn/sublimate ~4,890 C
- Iron: Melt ~1,560 C
- Copper: Melt/begin boiling ~1795 C
- Aluminum: Melt ~660 C
- Zinc: Melt ~434 C
- Brick: Melt to glass like substance ~2,430 C
- Brass: Melt ~1,900 C
- Lead: Boil ~1730 C
- Water: Just get hot, not boil

Picture Found at:

http://www.waterfuelconverters.com/Videos/ Or WaterTorch.com

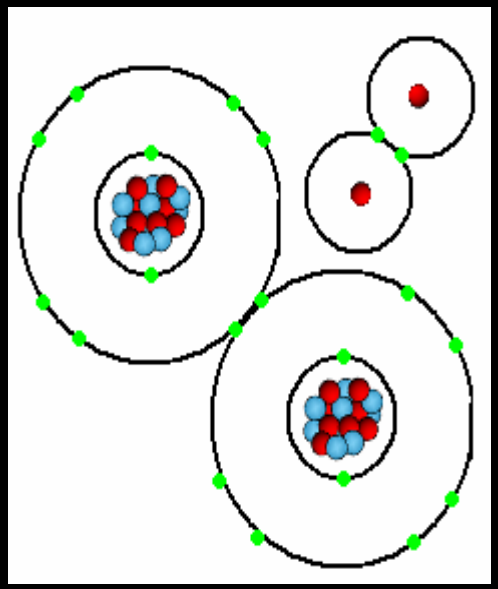
All measurements made by InfraCAM SD thermal imaging storage camera system

Different Theories on Brown's Gas

- Monatomic Theory
- Water Magnecule Theory
- Plasma Orbital Expansion Theory

Monatomic Theory

Diatomic Hydrogen and Oxygen are common in nature. They are said to form instantly when electrolyzed and separated from water.

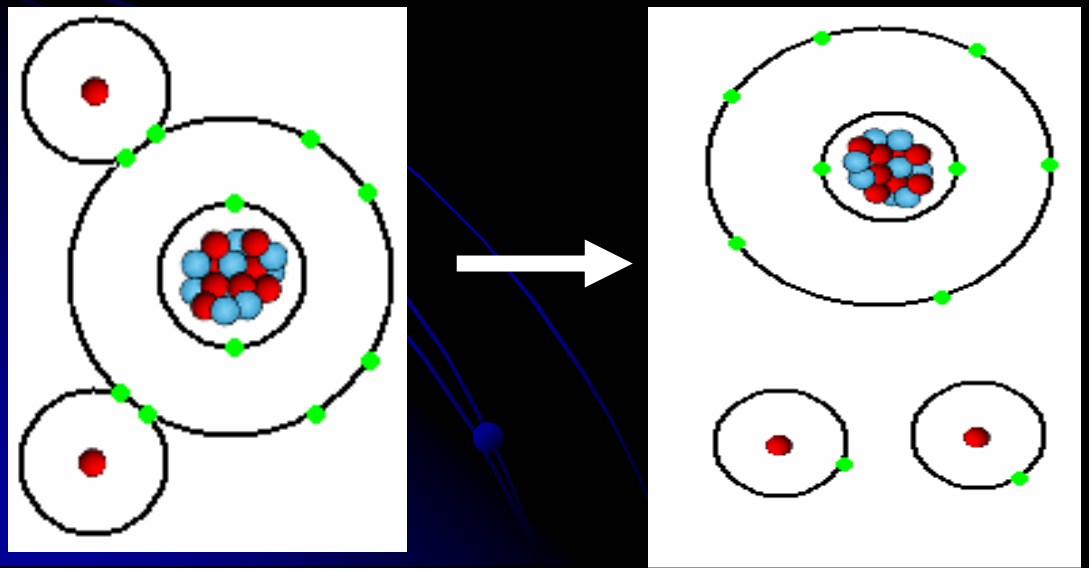


$2H_2O + ne^{--} \rightarrow 2H_2 + O_2$

Diatomic

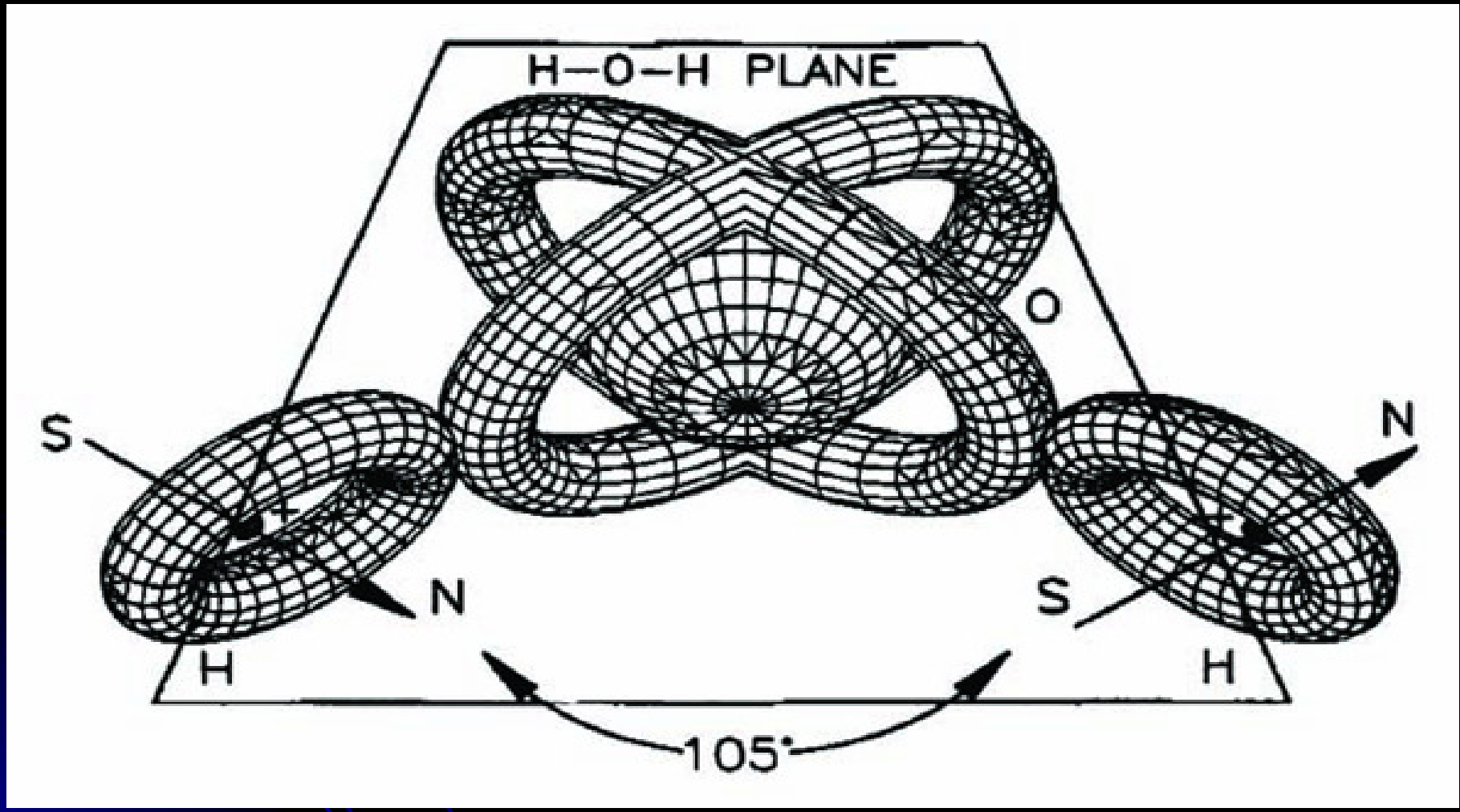
$H_2O + ne^{--} \rightarrow 2H + O$

Monatomic



- Mono-Atomic Hydrogen and Oxygen are not natural
- Some say that H and O could exist if in a special ratio of O:H
- This would account for most of the extra energy stored in Browns Gas

Water Magnecule Theory

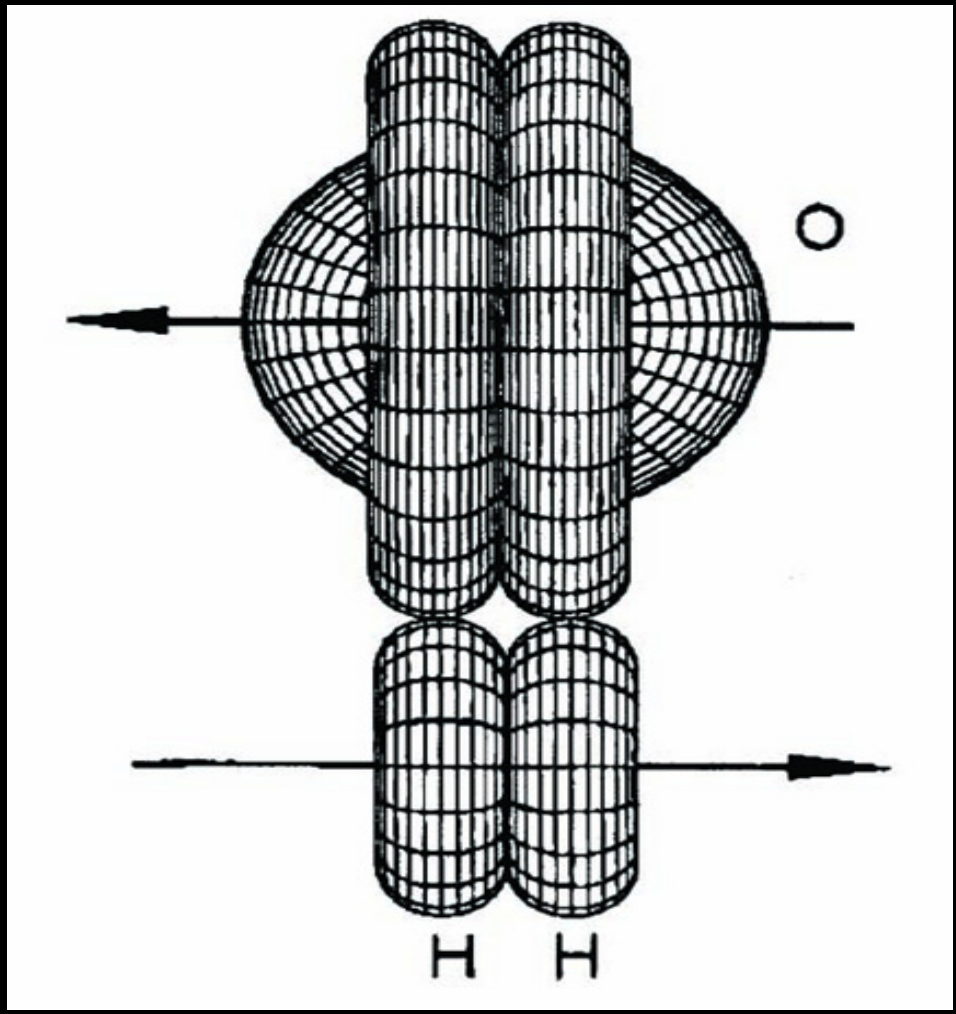


"A New Gaseous and Combustible Form of Water," Dr. Santilli

International Journal of Hydrogen Energy **31** (9), 1113 (2006)

Water Magnecule Theory

The electrons line up producing magnetic fields that will then collect to form small clusters of molecules that hold energy.



"A New Gaseous and Combustible Form of Water," Dr. Santilli

International Journal of Hydrogen Energy **31** (9), 1113 (2006)

Water Magnecule Theory

“BG is a mixture of hydrogen and oxygen that is a 'fluid crystal' as Yull Brown called it. The mixture contains H, H2, O, O2 and water vapor (the water vapor is important) that forms in masses that Prof. Santilli calls magnecules. Magnecules seem to be the reason that up to 3% of the gas can be monatomic and is stable in that form. Magnecules would also explain the 'extra' electrostatic charge of the gas.” George Wiseman

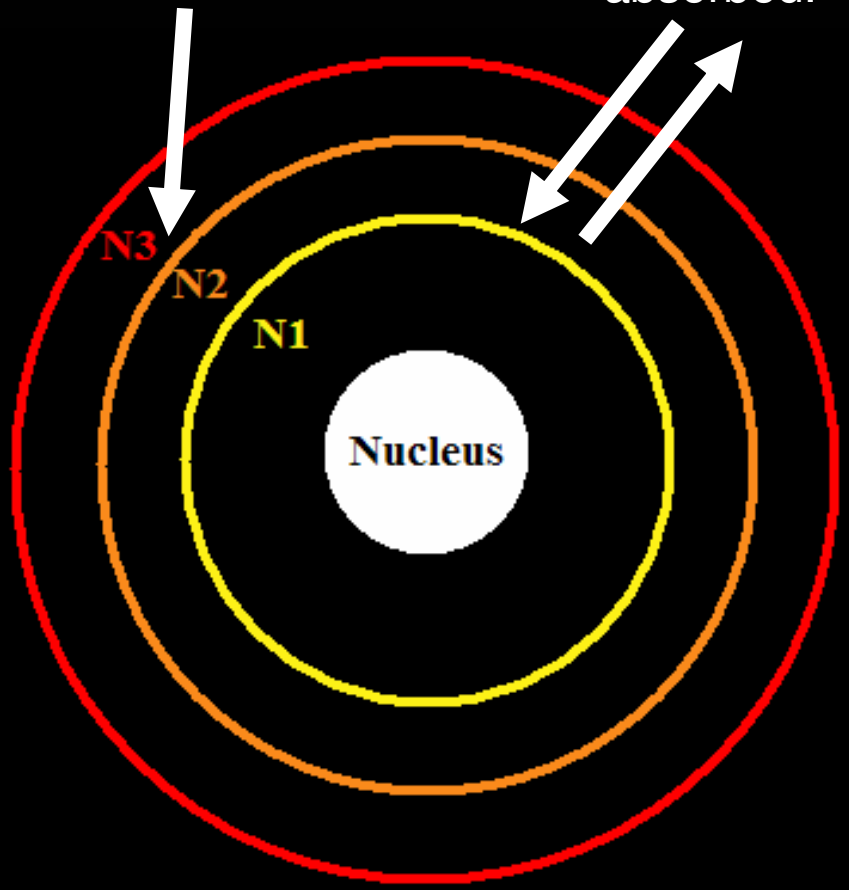
Picture Found at:

http://www.eagle-research.com/store/images/products/1200w_G_web.jpg

Plasma Orbital Expansion Theory

The orbitals where electrons reside

When electrons fall, energy is produced, when electrons rise energy is absorbed.



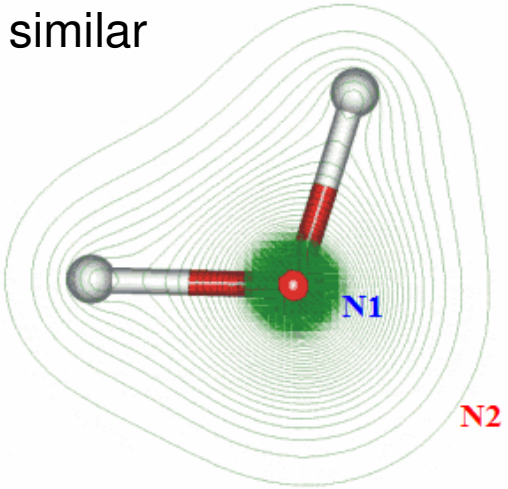
Picture Found at:

http://en.wikipedia.org/wiki/Plasma_lamp

Common Plasmas

Plasma Orbital Expansion Theory

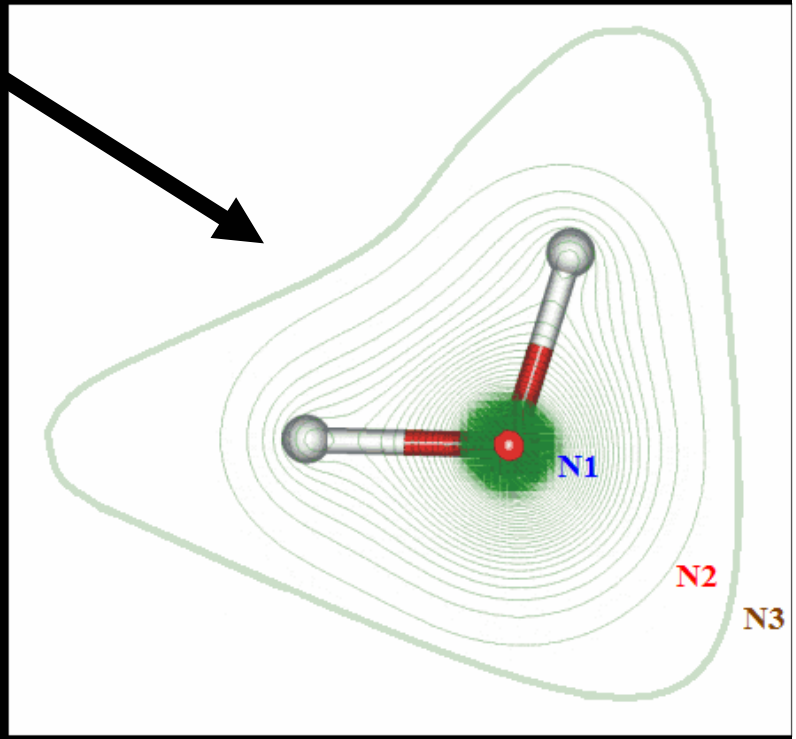
"Normal" water has electron density similar to this.



Picture Found at:

http://www.lsbu.ac.uk/water/anmlies.html

New electron orbit created to carry the extra electrons.



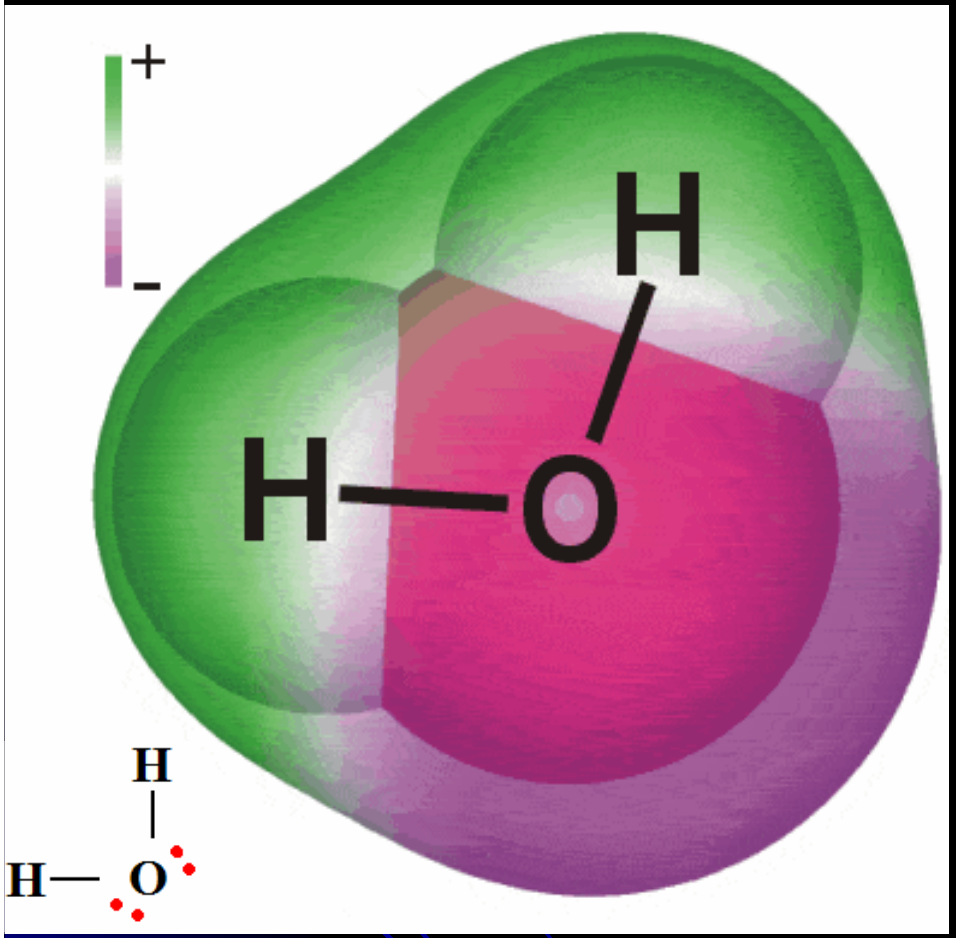
Picture Found at (slightly modified by me):

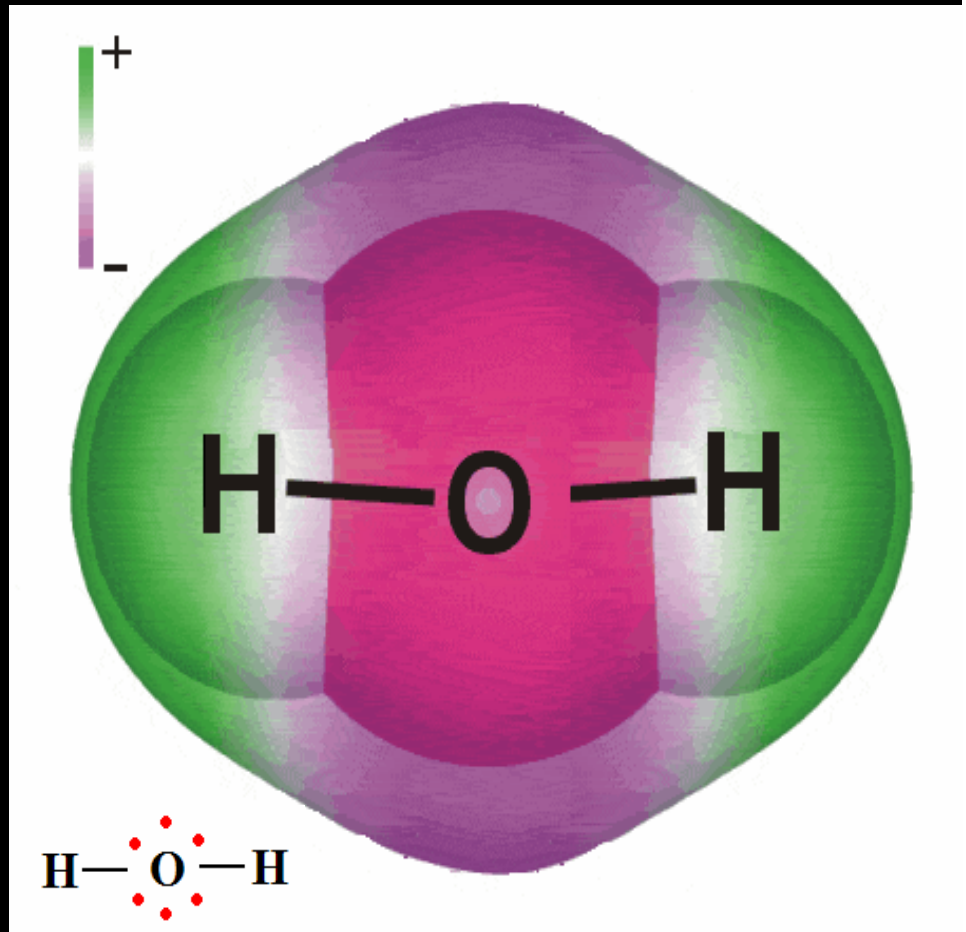
http://www.lsbu.ac.uk/water/anmlies.html

Cold or Non-equilibrium Plasmas

Plasma Orbital Expansion Theory

Picture Found at (right picture has been modified): http://www.lsbu.ac.uk/water/anmlies.html



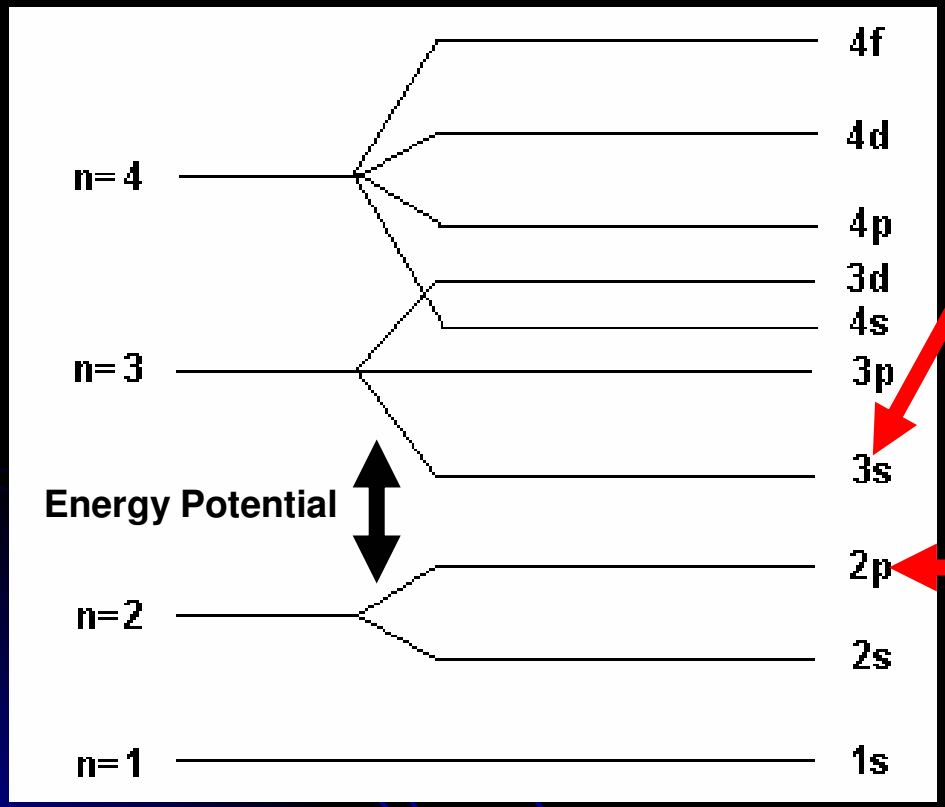


Water's original shape is bent with about 107 degree bend. This shows the polarization of the normal water.

The new shape of Brown's Gas will have the hydrogen's opposite from eachother. This forms a new molecule that is non-polar (no extra charges or magnetism).

Plasma Orbital Expansion Theory

There are 4 types of shells that electrons can be in, S P D F



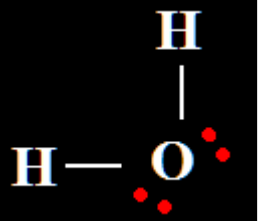
This represents the orbitals or shells that electrons can be in.

Brown's Gas may be moving to this orbital, this would account for a lot of electrically stored energy!!!

This is the orbital that water is normally.

Energetic Browns Gas

Normal Water



= Electrons

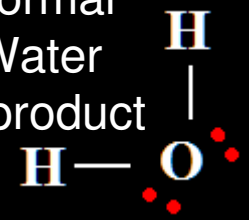
H = Hydrogen

O = Oxygen

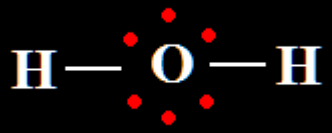
--- = Bonding

Plasma Orbital Expansion Theory

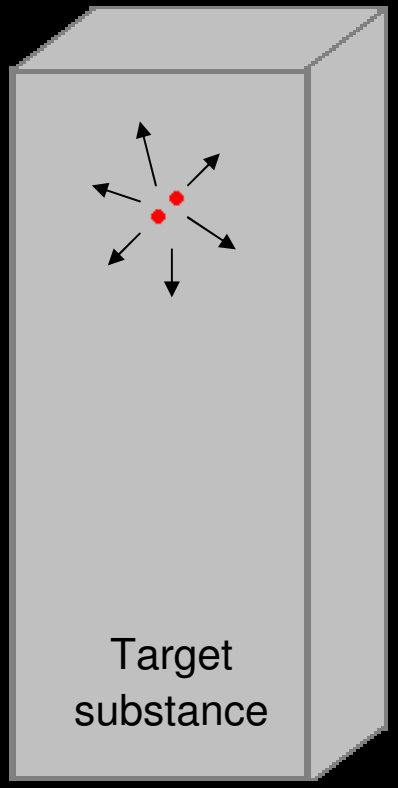
Normal Water Byproduct

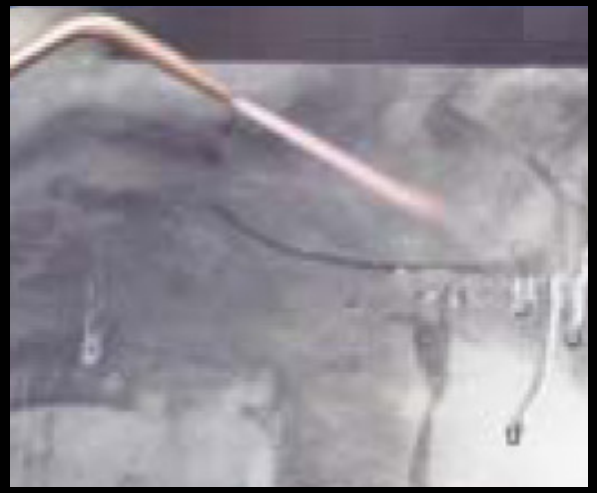


Torch



Browns Gas





Picture Found at:

http://www.wikibooks.com/Vidos/BrownsGas.html

Electrons scatter in all directions

producing a high heat plasma

= Electrons

H = Hydrogen

O = Oxygen

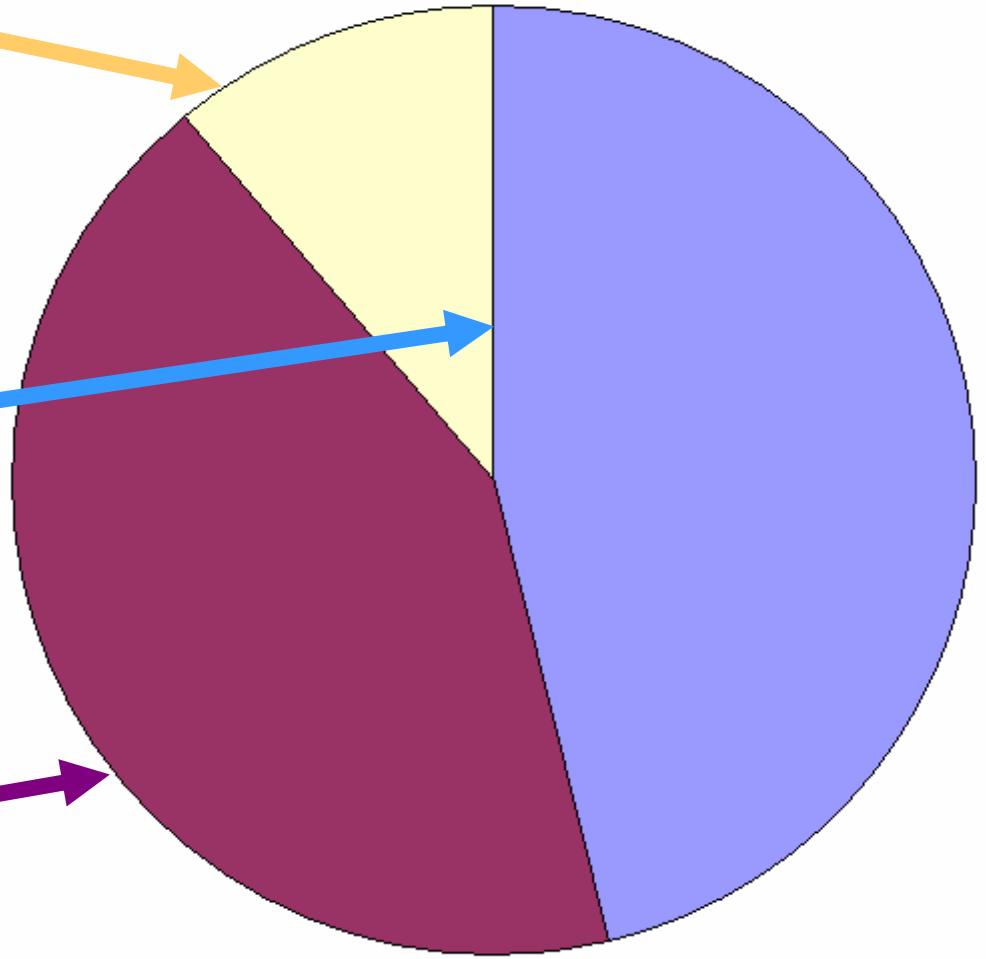
--- = Bonding

Tungsten Test Data

11% tungsten (VI) oxide (trioxide)

46% tungsten dioxide

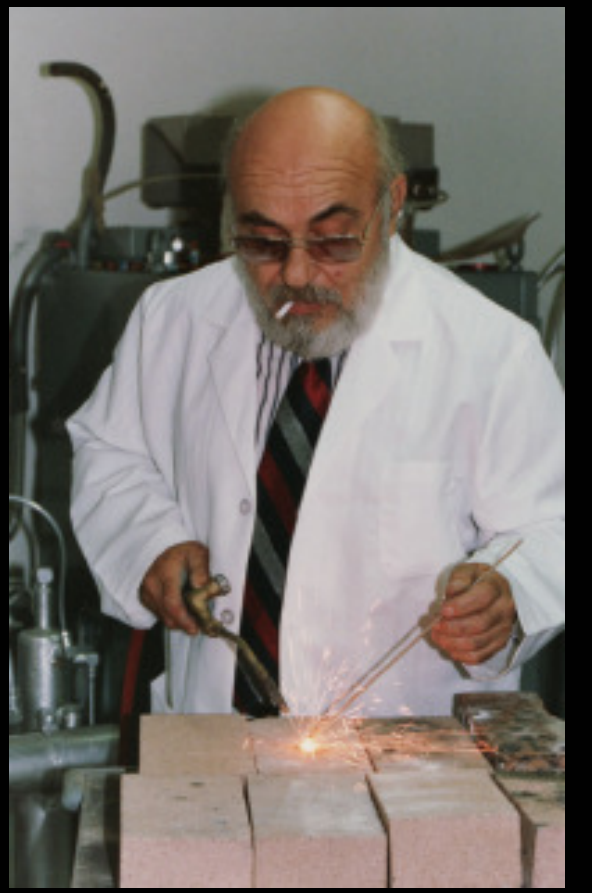
43% straight tungsten metal



laboratory gas spectrometer analysis on tungsten metal oxidized by Brown's Gas at Idaho National Laboratory

Points of Interest

- Can weld two dissimilar materials together
- When melting two substances, the two substances will not have same temperature
- You can swipe your hand through the flame with no harm



Picture Found at:

http://www.waterfuelconverters.com/Videos/Video14.html

Points of Interest

- Electric shock has been reported while using a torch, conductive flame and gas
- Will not boil water
- Claims of neutralizing radioactive waste
- Claims of element transmutation

Picture Found at:

http://www.waterfuelconverters.com/Videos/Video14.html

Theoretical Possibilities and Future Projects

- Use in space
- New breakthroughs in chemistry
- Cheaper and easier welding
- No flux required when welding
- New alloys
- New energy storage or battery types
- Potential fuel
- Breakthroughs in plasma physics
- Comparison of metals or non-metals when using the torch on them
- The burning rate of Browns Gas (Possibilities of proving it is not just diatomic hydrogen and oxygen)
- More research needed in the claims of nuclear radioactivity neutralization
- More research in general, who knows what more could be found!

“Of all elements, hydrogen and oxygen should hold no secrets.”

Dr. Rhodes

Are there any questions?

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For more information:

www.waterfuelconverters.com

http://pesn.com/

www.keely*net.com*

Google search: Brown's Gas