

# Matt's Mad Science and Inventions

In the last half year I have invented, built and published quite a few inventions, and “mad science art projects”. Many are innovations that have never before been produced or documented. Here is a short list of some of the most interesting projects.

## TIP-TYPE

**Utility** : Keyboardless Typing, 8bit chorded input, touching fingers to thumbs

**Published** May 2013

**Youtube Videos** : <http://youtu.be/WwFxz2X4BAU> , <http://youtu.be/ZRyKF5w8F8g> , <http://youtu.be/zXXu4NDabGE>

**Web Articles** : <http://www.dscredit.org/tip-type-new-alternative-keyboardless-typing>  
<http://www.dscredit.org/diy-keyboardless-typing>  
<http://www.dscredit.org/tip-type-2nd-prototype-diy-keyboardless-typing-air>  
<http://www.dscredit.org/tip-type-typing-jewelry-1st-attempt-fail>

Tip type is a new way of typing by touching the fingers to the thumbs. It could be made USB, or bluetooth. I think the coolest application would be in conjunction with Google Glasses, one could walk down the street while typing in air. It also allows full relaxation of the wrists offering potential therapeutic benefits.



## AWE sensor system

**Utility** : Capturing water waves as electrical signals

**Published** May 2013

**Youtube Videos** : <http://youtu.be/yw--Kp7YWAA> , <http://youtu.be/bh9Do2dlK0s> ,

**Web Articles** : <http://www.dscredit.org/aqua-wave-effect-awe-lights>  
<http://www.dscredit.org/electric-music-lights-show-awe-sensor-vj-lights>

The AWE sensors work by sensing water waves with electrodes hanging just above the water level. This allows water waves to be captured electrically, meaning multiple wave inputs can be used and even allow the water to be used as a physical computation device.



## Wave beat pattern signal generation

**Utility** : Generate beats and patterns via water wave propagation and resonance

**Published** September 2013

**Youtube Videos** : <http://youtu.be/KRy3kP4QYa4>

**Web Articles** : <http://www.dscript.org/wave-pond-water-beat-box>

Wave sensors trigger signals fed into computers. The wave environment is physically designed to produce the desired beats and patterns. This Human physical interface is used by “drawing in the water” to produce beats/patterns sent to a computer or electronic device.



## Magnetite Saltwater Blocking Relay

**Utility** : Blocking control of electrical signals with magnetite crystals in salt water

**Published** May 2013

**Youtube Videos** : <http://youtu.be/3mMECBNyNMg>

**Web Articles** : <http://dscript.org/diy-magnetic-water-analogue-switching>

Magnetic crystals suspended in agitated salt water can be pulled via magnets to block anodes and cathodes, resulting in the ability to block electrical signals through water via magnetic fields. When the power to the magnet is removed the magnetic particles disperses and the current flows freely again.



“Mad Science” and inventions by Matthew DeBlock  
All invented and published while in Shanghai between May and Jan 2013  
More projects, inventions and art on youtube Chanel and website  
<http://dscript.org>    <http://www.youtube.com/user/freedscript>

## Water Oscillator

**Utility** : Produce an oscillating electrical signal via pulsing water diffusion gap

**Published** July 2013

**Youtube Videos** : [http://youtu.be/KVb\\_mEVzEks](http://youtu.be/KVb_mEVzEks)

**Web Articles** : <http://dscript.org/diy-oscillator-making-water-sing>

By rapidly opening and closing a gap beneath water, an electrical signal passing through will produce oscillations. Frequency can easily be produced within the human audible spectrum. Could be used for computing, electronics, or even more appropriately perhaps, for music and audio generation.



## Ice Cube Electrical Relay

**Utility** : Control electrical conduction by applying heat to weaken ice lattice

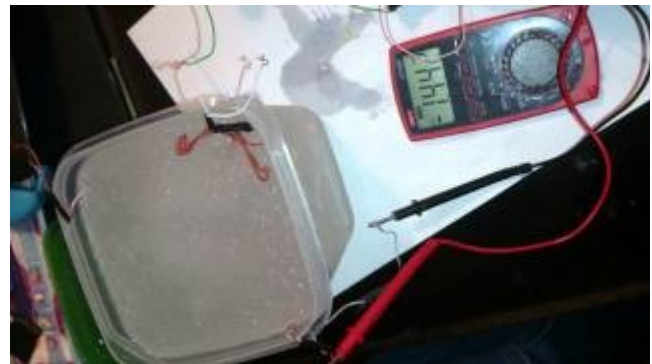
**Published** March 2013

**Youtube Videos** : <http://youtu.be/o61wtb7dSRA>

**Web Articles** : <http://dscript.org/ice-cube-transistor>

<http://dscript.org/thermal-water-ion-transistor>

By placing a heating element between two contacts frozen in slat water, at first conduction will be low due to the crystal structure of the ice blocking ions from flowing between contacts. Applying current to the heat element will break down the crystal lattice and increase conduction.



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## Saltwater Magnetite Crystal Production

**Utility** : Produce Magnetite easily with iron, saltwater and plastic container

**Published** July 2013

**Youtube Videos** : <http://youtu.be/wlcP1GhVvjM>

**Web Articles** : <http://dscript.org/homegrown-ironii-oxide>

By allowing iron to oxidize in heavily salted water, the lower levels of dissolved gas prevent it from fully oxidizing to iron(III)oxide, yielding magnetite crystals.



## Copper(1)Chloride High Purity Production

**Utility** : Easily produce high purity copper(I)chloride

**Published** December 2013

**Youtube Videos** : [http://youtu.be/SnndW\\_seKRM](http://youtu.be/SnndW_seKRM)

**Web Articles** : <http://dscript.org/diy-copperchloride-make-your-own-cuprous-chloride>

High surface area copper, submerged in brine, in an airtight plastic container in sunlight yields slow growing high purity copper(I)chloride. Also documented is an experiment to electrolyze it producing porous copper oxide.



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<http://www.youtube.com/user/freedscript>

## Multi-Intensity Surface Tension Laser Effect

**Utility** : Generate visual laser shows with oil and water from music

**Published** November 2013

**Youtube Videos** : <http://youtu.be/RIk0zgRSgdY>

**Web Articles** : <http://dscript.org/fire-fountain-diy-music-laser-show-wateroilpump>

Using a music signal to relay control a water pump which pumps water into water/oil, with droplet catchers hung in the path of the escape stream and a laser directed through the droplets and stream, then off the liquid surface and onto a wall/screen to produce analogue musical visualization without digital electronics.



## Dual Layer Water Spray Laser Effect

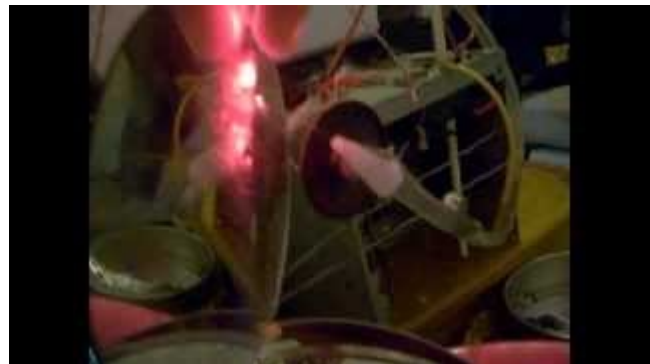
**Utility** : Generate visual laser shows with water from electrical or audio signal

**Published** September 2013

**Youtube Videos** : <http://youtu.be/oF8re1BTst8>

**Web Articles** : <http://www.dscript.org/rainy-day-diy-music-laser>

Water is sprayed via a nozzle which is agitated by an electrical/audio signal. The spray first hits a vertically slanted mirror before falling down onto a horizontally slanted mirror. A laser is then shot through the active regions of both producing a visual laser effect that is almost organic in appearance. The laser can also be vibrated via the signal to produce a raster scan effect.



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## Electrolysis Laser Microscope Visualization

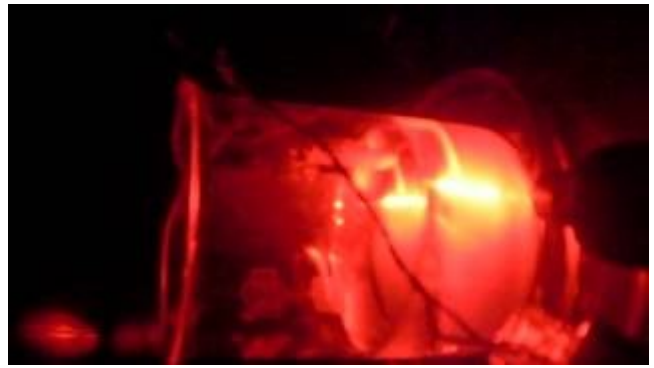
**Utility** : Generate visual laser shows with water from electrical or audio signal

**Published** June 2013

**Youtube Videos** : <http://youtu.be/LBORVP9SY4Q> , <http://youtu.be/bgIwAk1T-2I> , <http://youtu.be/uaecWnlJwmg> , <http://youtu.be/aozhVXdM7RY>

**Web Articles** : <http://dscript.org/electro-bubble-laser-light>

An electrical or audio signal is used to electrolyze ion saturated water solutions, a laser is then shot through the active region, enlarged with a lens, and projected onto a wall, screen or any other surface producing a beautiful laser show with currents and particles reacting to the music or signal.



## Magnetic Particle Water Laser Show

**Utility** : Generate visual laser shows with water from electrical or audio signal

**Published** August 2013

**Youtube Videos** : <http://youtu.be/q8Oi7w57gncg>

**Web Articles** : <http://dscript.org/diy-water-magnetic-laser-show>

An electrical or audio signal is used to power an electromagnet in a water solution with magnetic particles such as magnetite crystals, the particles react to the magnetic fields and move within the water according to the signal. A laser is shot through the active region, magnified and projected onto a wall or screen producing a visual effect of particles reacting to the signal.



I have also invented some artistic writing systems. The most notable 2 are:

Dscript 2D writing system -

[Introduction PDF \( http://dscript.org/dscript.pdf \)](http://dscript.org/dscript.pdf)

and

WireScript 2D/3D writing system

[Introduction PDF \( http://dscript.org/wirescript.pdf \)](http://dscript.org/wirescript.pdf)

I have plenty other inventions and art, and I'm always coming up with more, it is an endless passion. I can be reached easily via any one of the following

LinkedIn -- <http://cn.linkedin.com/in/deblock/>

Facebook – <http://www.facebook.com/Dscripting>

Youtube – <http://www.youtube.com/user/freedscript>

Email – [vasten@dscript.org](mailto:vasten@dscript.org)

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Dscript writing system projects have spanned over a decade and several locations