Siansonic Technology
Leading The Ultrasonic Technology
1986
Jinrong Ultrasonic Transducer Factory was founded

2010
Registered ‘Siansonic’ as the trade mark

1997
Dongfang Jinrong Ultrasonic Electrical Equipment Co., Ltd. was founded

2011
Officially change the name to Siansonic Technology Co., Ltd
Company Profile

Accomplishment

- One of the **Earliest** private companies making ultrasonic and piezoelectric devices in China
- Currently more than **120** employees onboard, from which **20** of them are from research department
- The revenue for one year is over **USD $10,000,000**, with increase of **120%** per year
- Holding national **ISO9001, ISO14001** certification
Content   Overview

Company Profile   Market & Product
Credentials       Research & Development
Europe is the second largest market in the world after China. It is for mainly medical and high level consumer products.

China is always the first position of our market. We provide high quality products and services to local customers.

America: 20%

Atomizer transducers and other piezos constitute the market in USA, Canada and south America.
WE HAVE……

Over 20 applications

Cover 6 different markets

Market and Product

- Energy
- Medical
- Nanotechnology

Market Distribution

- Biology and Medical: 8%
- Consumer and Home appliances: 5%
- Energy: 10%
- Industrial: 12%
- Scientific Research: 20%
- Agriculture: 45%

Home Appliances

Manufacturing

Scientific Research
Thin Film Solar Cell
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. It is used on thin film solar cell and solar panel glass coating, such as AR coatings and self-cleaning coatings.

Solar Panel
The ultrasonic spray coating technology is used on solar panel glass coating, such as AR coatings and self-cleaning coatings. It can provide a uniform and nano thin film coating on the solar panel glass.

Fuel Cell
The ultrasonic spray coating technology can provide a uniform and high efficient thin film for proton exchange membrane fuel cell.
Market and Product

Stent & Catheter
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. Siansonic Nanomist technology can provide a very thin coating point (1mm) with ultra-low flow rate (0.001ml/min). It is very good for medicine coatings on stents, guide wires and catheters.

Blood Collection Tube & Syringe
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. Siansonic ultrasonic spray coating technology can provide a good and efficient solution for coatings of blood collection tubes, syringe and other inside coatings of tube

Nebulizer & Inhaler
Ultrasonic atomization technology is widely used in medical nebulizers and inhalers. Siansonic ultrasonic atomizer transducers and atomizer kits can provide a highly stable and good performance. The general life time is more than 10000 hours.
Infusion
The non-invasive ultrasonic detection of air bubbles in fluid-filled tube is widely employed in many fields of medical, science and industry.

Other Medical Therapies
Ultrasonic technology is widely used in many applications related to medical therapies, such as HIFU cancer therapy. Siansonic provide piezoelectric ceramic elements with stable and excellent performance for ultrasonic medical therapy devices.
Nanomaterials | Spray Drying & Pyrolysis
Ultrasonic atomization technology, especially nozzle technology is being considered as the best solution for nano-spray drying and pyrolysis which are popular methods for nanopowders manufacturing.

Nano Thin Film
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. It is widely used on various of thin films and nano coatings manufacturing, such as thin film solar cell, PEM fuel cell, thin film ceramic, glass coating, etc.

Dispersion
The novel technology of ultrasonic dispersion in liquid delivery is to employ the ultrasonic into syringe filled with suspension liquid, so that the nano particles can be nicely dispersed during the suspension liquid delivery. The ultrasonic dispersing syringe pump is used in many spray coating applications with suspension liquid.
Market and Product

Touch Screen
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. The nano coatings on touch screen, such as self cleaning coating and AR coating can be created by ultrasonic spray nozzles.

OLED Display
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. The nano thin films in OLED can be efficiently created by ultrasonic spray coating system.
Humidifier & Diffuser
Ultrasonic atomization technology is widely used in humidifiers and aroma diffusers. Siansonic ultrasonic atomizer transducers and atomizer kits can provide a highly stable and good performance. The general life time is more than 10000 hours.

Mist Display
The mist display is a novel display technology such as the display made by Displair Inc. The ultrasonic atomizing devices especially high efficiency model of Siansonic can provide a stable and nice mist screen for the display.
Electronics
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films and the utilization of coating is significantly improved. The flux coating on PCB, electrode layers, etc. start using ultrasonic spray coating technology rather than conventional two-fluid spray technology.

Glass
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. It is widely used on various of glass coatings, such as AR coatings, self-cleaning coatings, etc.
Nanotechnology
Nanomaterial is considered as one of the most important technologies in the 21st century. Ultrasonic atomization technology, especially nozzle technology plays a large role on manufacturing of nanomaterials such as nano thin films, nano powders, nano carbon, etc.

Thin Film Solar Cell
The ultrasonic spray coating technology can provide a solution to create the highly uniform and ultra-thin films. It is used on thin film solar cell and solar panel glass coating, such as AR coatings and self-cleaning coatings.
Product Category

- Nano Particle Generator
- Ultrasonic Spray Nozzles
- Piezoelectric Ceramic
- Megasonic Cleaning
- Ultrasonic Spray Pyrolysis & Drying
- Mini Nebulizer Kit
- Ultrasonic Spray Coating

Devices and Machines Design
Piezoelectric Ceramic

Siansonic employs the patented nickel electrode and titanium alloys electrode technology for the piezoelectric ceramics to obtain much higher stable performance than conventional piezoelectric ceramics with silver electrode. The high quality piezo is widely used on applications of medical, industry, military and aerospace.

- **HIFU (High Intensity Focused Ultrasound)**
  Piezoelectric ceramic with concave shape to generate high intensity focused ultrasound (HIFU). HIFU is widely used for medical treatment and cosmetology, such as cancer treatment, fat burning, skin tension, etc. Siansonic provides HIFU piezo and transducer with wide frequency range from 300kHz-7MHz.

- **Ultrasonic Atomizer Transducer**
  Ultrasonic atomizer transducer is a piezoelectric wafer widely used for ultrasonic humidifier, medical nebulizer and many other atomizers. Siansonic uses the patented electrode coating technology for the atomizer transducers to obtain a very long lifetime and highly stable performance. The transducers with nickel coating or titanium alloys coating can continuously operate with good performance for more than 10000 hours at normal condition.
Ultrasonic spray coating technology is mainly used for nano scale or micron scale thin film coating. It can provide highly uniform coating layer with high material transfer efficiency. It is widely used on fuel cell, solar cell, glass coating, TCO, stent coating, balloon catheter etc.

- **Ultrasonic Spray Nozzles**
  Unlike conventional spray nozzles that rely on pressure and high velocity motion to shear a fluid into small drops, the ultrasonic spray nozzle uses only low ultrasonic vibrational energy for atomization. It is widely used for ultrasonic spray coating and pyrolysis.

- **Stent Coater**
  Ultrasonic spray coating for stent: ultrasonic spray nozzle, precision ultrasonic generator, liquid delivery, motion system, stent holder, etc.

- **Blood Collection Tubes & Syringes**
  Ultrasonic spray nozzles have been considered the premier BCT and syringe barrel coating technology. Siansonic Penetrator nozzles allow tube equipment manufacturers to integrate the benefits of next generation precision ultrasonic coating into their production lines.
**Ultrasonic Spray Coating**

Ultrasonic spray coating technology is mainly used for nano scale or micron scale thin film coating. It can provide highly uniform coating layer with high material transfer efficiency. It is widely used on fuel cell, solar cell, glass coating, TCO, stent coating, balloon catheter etc.

- **Fuel Cell/Solar Cell Coater**
  UC360 ultrasonic coater is mainly used for regular thin film coating, such as PEM fuel cell electrode layer, thin film solar cell, TCO, glass coating etc..

- **Balloon Catheter Coater**
  Ultrasonic spray coating for balloon catheter: ultrasonic spray nozzle, precision ultrasonic generator, liquid delivery, motion system, balloon catheter holder, etc.
Ultrasonic spray coating

Market and Product

Ultrasonic Spray Pyrolysis & Drying

By using ultrasonic atomization technology, spray pyrolysis and spray drying system can generate highly uniform micron scale and nano scale fine powders.

- **Ultrasonic Spray Pyrolysis System**
  Ultrasonic spray pyrolysis includes ultrasonic atomizer, tube furnace, nano collector, gas control system, etc.

- **Ultrasonic Spray Drying Nozzle**
  Ultrasonic spray drying nozzle can be directly used for regular spray dryer by replacing the conventional spray nozzle. It can provide more uniform powders.
Market and Product

Megasonic Cleaning

Using higher frequency energy with accelerated water molecules, submicron level cleaning is possible, without damaging sensitive microelectronic device. Megasonic (high frequency ultrasonic, 400kHz-3MHz) Cleaning is widely used on industries of semiconductor, lens, display, etc..

Ultrasonic Bubble Detector

The non-invasive ultrasonic detection of air bubbles in fluid-filled tube is widely employed in many fields of medical, science and industry. It uses high frequency ultrasonic signal to obtain high sensitivity on detecting air and liquid in tubes.
Market and Product

Other ultrasonic & piezoelectric devices

- **Mini Nebulizer Kit**
  Mini nebulizer kit that includes high efficiency atomizer transducer and drive PCB are widely used for portable nebulizers and medical inhaler. With high efficiency transducer and compact design, drive PCB is as small as a coin. The mini nebulizer kit is especially suitable for the application of atomization in tiny space.

- **Nano Particle Generator**
  The minimum droplet size can be only 500 nm. The nano particle generator has the smallest droplet in ultrasonic spray system. It is mainly used for nano spray drying, spray pyrolysis, reactants injection and thin film coating.

- **Devices and Machines Design**
  We provide R&D consulting and product design service for customers all over the world. We can offer customers excellent product design, manufacture consulting, quality control consulting on piezoelectric and ultrasonic devices with our 30 years’ experience and talented engineers.
Credentials - Yadu/Midea/Gree

1990-Present

Sinsonic has become the main developer of ultrasonic atomizers and nebulizers for

YADU HUMIDIFIER, MIDEA, GREE, etc.
Credentials-Biocartis & Philips Electronics

2005-Present

8 years R & D support for piezo based ultrasonic dispersion. Siansonics has kept responsible for providing the ultrasonic dispersion.
Credentials-Siemens

2011
Provide the ultrasonic device for a confidential project regarding laundry service
Credentials-Apple

2014-Present

Provide the machines and solutions for touch screen glass coating, 3D glass coating, conductive ink coating etc.
Research and Development

Research Group: 20

System Group: 7

Device Group: 7

Piezo Ceramic Group: 6

Patents:

More than 30 patents in total
More than 6+ patents increased each year
Research and Development

Key accounts

Siansonic services over 80 customers including companies and institutes……

Cooperated Institute

[Logos of various companies and institutes]
For more information, please visit www.siansonic.com
Thanks for your time!

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