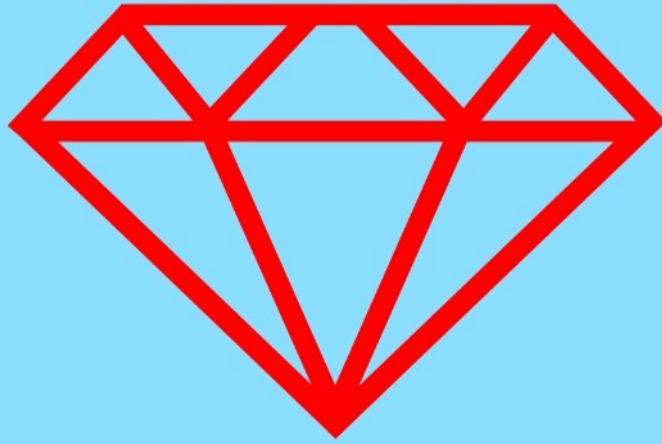
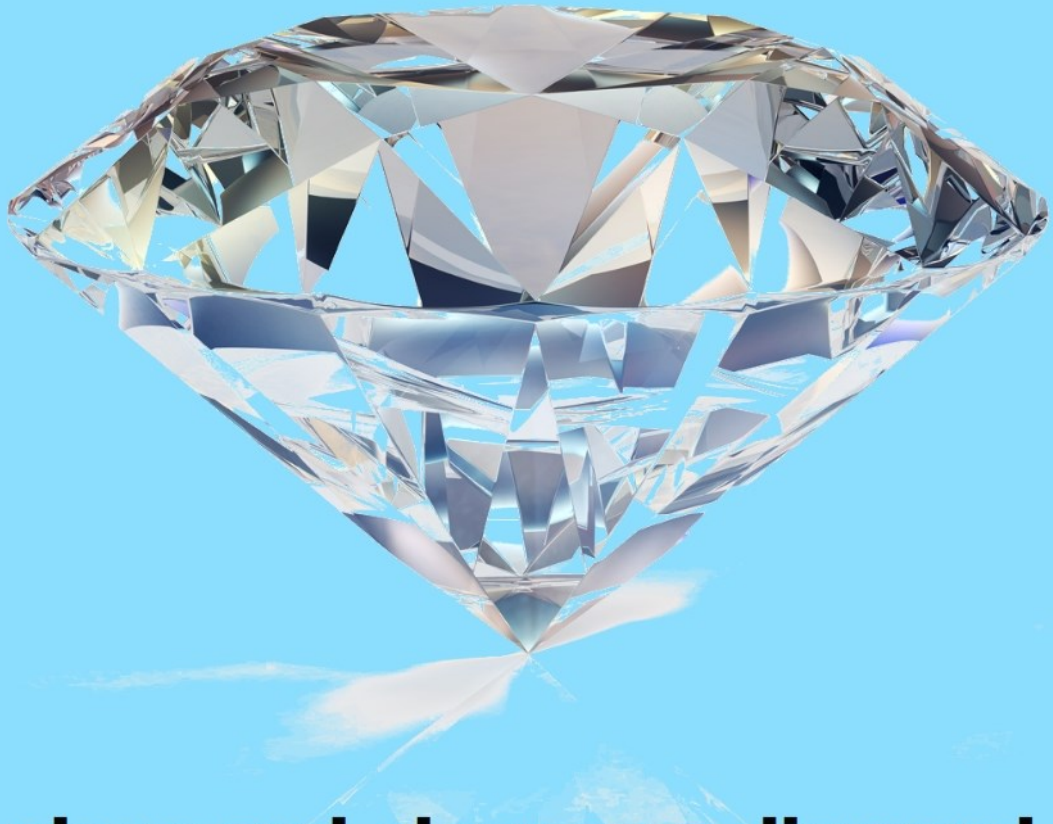


HEGER



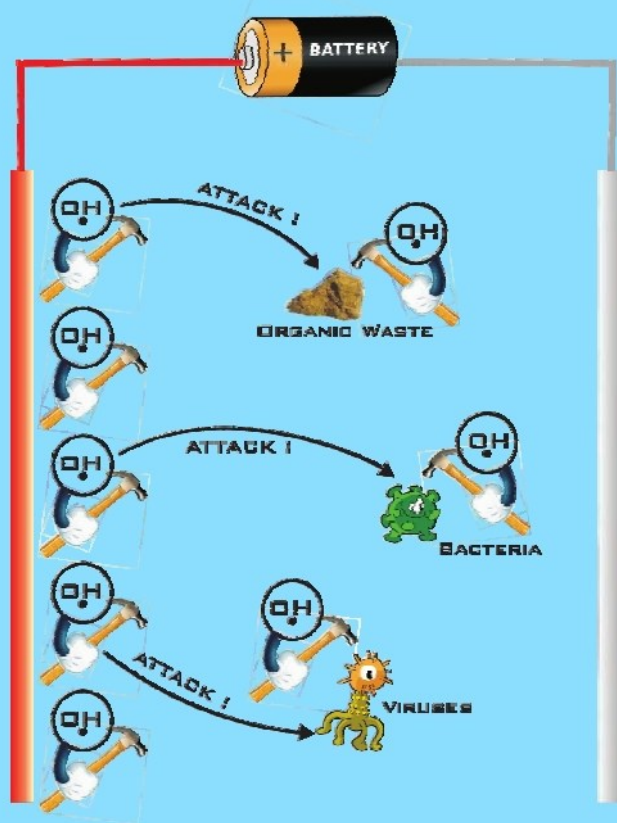
WATER



clean and clear as a diamond

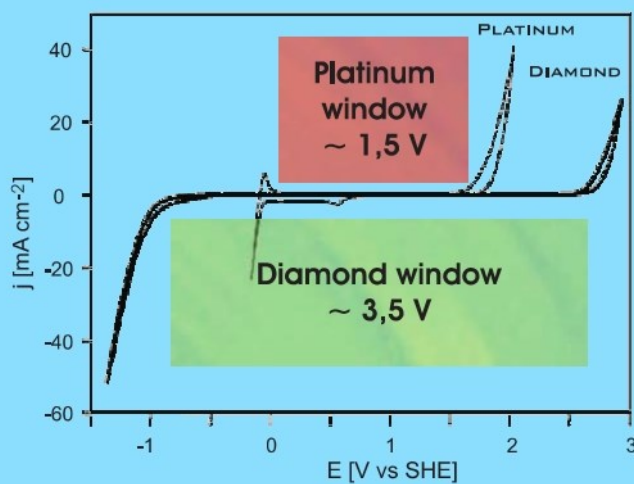
www.hegerdiamond.com

EASY AND CHEMICAL FREE WATER TREATMENT BY DIAMOND ANODES

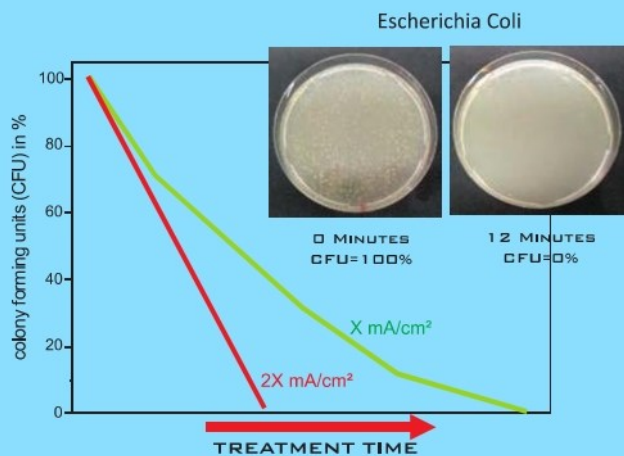
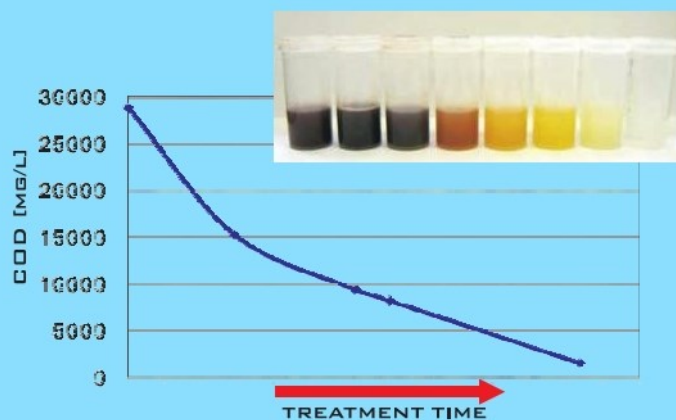


ADVANTAGES

- EASY OPERATION
- CHEMICAL FREE
- LOW MAINTENANCE
- SCALABLE TO YOUR NEEDS



Diamond made electrically conductive by boron doping and used as an anode in an electrochemical cell shows in aqueous media a large electrochemical window. In comparison to Platinum it is more than doubled. This enables diamond to generate OH-radicals directly in water without addition of any other chemical. The OH-radical is one of the strongest oxidants and extremely aggressive to any dirt, bacteria and viruses and therefore very effective in water treatment.



Especially in warm circulation water bacteria grow fast. The aggressive OH-radical attacks the hull of the bacteria and cracks them. Same happens to viruses. The graph shows the elimination rates of escherichia coli at different current densities.

MAKE THE APPLICATION EASY!

STANDARDISED ELECTRODES

STANDARDISED STACKS

COMPLETE PLANTS

Best technology is less helpful if there is no working system and support! With this in mind we developed standard electrodes and complete equipped electrode stacks for easy use in your application. We also offer complete plug & play-systems from laboratory up to industrial scale. Nevertheless we are flexible to meet our customers requirements.

Standardised stacks:

There are two types of stacks comprising our two standard electrode sizes.

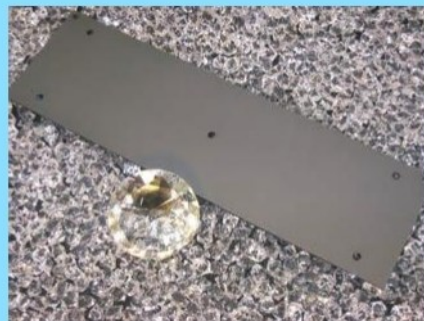
Type **HX2** up to 1.8 sqm electrode surface
max. 268.000mg COD removal/hour

Type **HX1** up to 0.9 sqm electrode surface
max. 134.000mg COD removal/hour



Complete plants

Shown plant is for advanced laboratory or small scale industrial application. Only a pump, a power supply and the electrode stack is needed.



Standardised electrodes

There are two standard size diamond electrodes: 0.15 sqm and 0.075 sqm. Both are double side coated with at least 12 μ m coating thickness for excellent stability.

www.hegerdiamond.com

WE MAKE CRYSTALLINE DIAMOND!

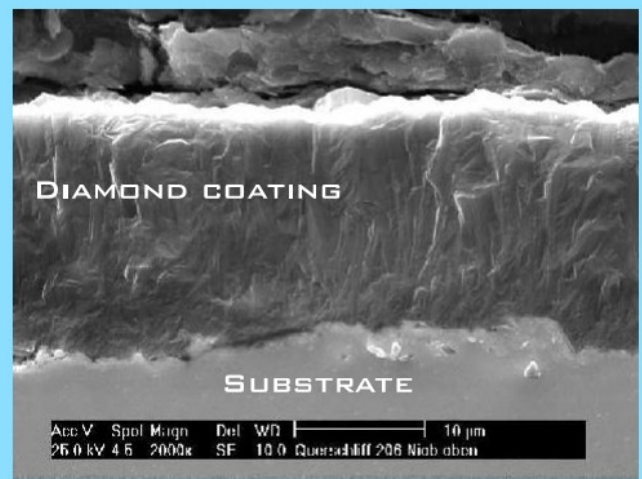


Production of large double side coated electrodes

For deposition of diamond the CVD-prozess (Chemical vapour deposition) is applied. In our production we use the latest and world largest CVD machines with special equipment for production of high quality diamond electrodes.

Quality control

For quality control we have access to a full line analytical equipment comprising SEM and light microscopy (crystal morphology), RAMAN (diamond quality), FTIR (thickness measurement) and Flatmaster (flatness).



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