Heraeus

Precious Metals

# Electrocatalysts for PEM Electrolyzers

## Heraeus catalysts save 50-90% on iridium compared to the market‘s benchmark!

Heraeus’ product portfolio includes electrolyzer catalysts with different precious metal loadings, which provide numerous benefits to your application. In order to find the perfect solution for your needs, you can conduct tests in Heraeus’ fully equipped on-site laboratories and test center.
Heraeus’ electrolyzer catalysts address_decreased iridium content while increasing efficiency and performance.
Our electrolyzer catalysts deliver the following benefits:

**ACTIVITY**
Efficient use of Iridium in different catalyst concepts allows to increase performance & reduce costs

**STABILITY**
With stability comes reliability, our catalysts will contribute to a high lifetime in your application


**IRIDIUM SAVING**
Ideal for large scale application due to significant savings in precious metal content

**ELECTRODE AREA SAVING**
Strong decrease in capital expenditure due to Iridium and catalyst material savings

## A comprehensive product portfolio to fit your needs

| Catalyst | H2EL-Ir | H2EL-IrO | H2EL-xxIrO-S | H2EL-xxIrRuO |
|---|---|---|---|---|
| Features | High metal purity | High surface area material | Reduced Ir content, supported material | Reduced Ir content |
| Performance focus | Highly active, stable | Highly active, highly stable | Excellent activity and material efficiency | Excellent activity and material efficiency |
| Ir crystallite size [nm] via XRD | 3 | 2 – 4 | 2.5 – 3.5, partly amorphous | 1.8 – 5.5 |
| BET surface area [m²/g] | 21 – 25 | >180 | 20 – 150 | 120 – 200 |
| Mass activity @ 1.45 $V_{cell}$ (IR-free) [A/g] | ~79 | ~86 | ~570 (30%) | ~450 (H2EL-50IrRuO) |

For more detailed information about our broad product portfolio, please contact our sales experts.

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