



ELECTRODE AND COMPONENT COATINGS

CAPABILITIES AND TECHNOLOGIES TO KEEP YOU MOVING AHEAD

Improve patient outcomes in medical device applications where stability, sensitivity, and signal fidelity are critical, including electrophysiology mapping, neuromodulation, and cardiac rhythm management.

All coatings developed by Heraeus Medevio are biocompatible and mechanically and chemically robust, enabling the miniaturization of electrodes without sacrificing signal quality. Leverage these unique technologies for high electrochemical stability, miniaturized devices, high resolution, high channel count, low impedance, and excellent signal-to-noise.

YOUR PARTNER IN BRINGING BETTER MEDICAL DEVICES TO MARKET.

Heraeus Medevio acts as a flexible, tailored, end-to-end extension of your engineering and product development teams. With expertise from materials, development, and pilot production to high volume manufacturing including unmatched clinical and technical expertise, Heraeus device experts will also help you efficiently manage global regulatory and submission requirements.

PRODUCT DESIGN & DEVELOPMENT

Global collaboration hubs committed to design and development with dedicated pilot production lines that can be mirrored in production

MANUFACTURING EXPERTISE

Proven manufacturing technology excellence and superior engineering know-how to solve complex challenges

COMMITTED TO QUALITY

170-year history in materials science and trusted quality

SUPPLY CHAIN OPTIMIZATION

Vertically integrated from concept to completion to simplify your supply chain

COATING MICROSTRUCTURE



ADVANTAGES OF ELECTRODE COATINGS

HIGHER CHARGE INJECTION CAPACITY

- Increased stimulation capabilities
- Low pacing thresholds

LOWER IMPEDANCE

- Allows for smaller electrodes
- Higher electrode density
- Lower noise and better resolution

RADIOPACITY

- Improved X-ray visibility
- More design options compared to conventional markers

CORROSION PROTECTION

- Allows use of alternative materials
- Protection of base metals

WETTING / METALLIZATION

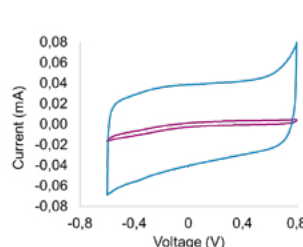
- Improved electrical contacting
- Allows joining of dissimilar materials

ELECTRODE/COMPONENT COATINGS OVERVIEW

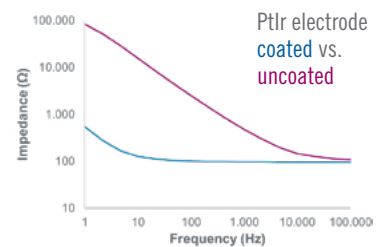
	Impedance Reduction	Charge Storage/ Injection	Corrosion Protection	Radiopacity	Wetting/ Metallization	Final Device	Flex PCB	Component
TiN	•	•					•	•
Porous Ir	•	•		•			•	•
Sputtered IrOx	•	•	•				•	•
Amplicoat®	•	•				•	•	•
El.chem. IrOx	•	•				•	•	•
Pt Electroplated			•	•	•		•	•
Au Electroplated			•	•	•		•	•
Dense Pt Ink			•		•	•	•	•

• Fully applicable • Applicable with limitations

CHARGE INJECTION



IMPEDANCE



CONTACT US TO LEARN HOW WE CAN PUT OUR FULLY INTEGRATED, GLOBAL FOOTPRINT TO WORK FOR YOU.

herausmedevio.com | contact us <https://bit.ly/herauscontactus>