Novel Impedance Cell for Highly Reactive Powder Samples

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University of Warsaw

10th International Symposium on Electrochemical Impedance Analysis 2014

4th June 2014, Borovetz, Bulgaria
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IMPEDANCE „JAWS”

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- simple construction
- possible to be load in a glovebox
- airtight

features

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- easy to use

IP protection

- expected protection in EU, USA, JP
- technology ready to use

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- All elements prepared using magnetic grinder
- Arrangement ensures parallel electrode surfaces
• ZEPWN pressure sensor
• range up to 100kN, resolution 0.1kN
• SICK laser distance sensor: set of 3 sensors / single sensor
• range 0.01–1mm, resolution 1μm
• DALLAS temperature sensor
• range up to 180°C, resolution 0.05°C
patent application:

- 2010 – the invention
- 2011 – Polish patent application (P.396725)
- 2012 – PCT patent application (PCT/IB2012/002111)
- 2014 – entrance to national/regional phase: EU, USA, JP
- 2015 – expected grant of patents

possible cooperation and licensing

- technology is ready to use
- University of Warsaw is willing to license the technology
advantages of the technology:
• possibility of investigation reactive powders
• simple, miniaturized construction
• simultaneous control of pressure and temperature
• precise control of (parallel) geometry of the electrodes
• electronic sensors with on-line view
• high pressure: 2GPa using press, 0.5GPa using screws
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Thank you for your attention