Method for hydrogen production in PEM cells at high potentials

Unique Technology Offer
- Polymer Electrolyte Membrane cell for water splitting and hydrogen production
- Noble metal free hydrogen evolution catalyst based on cobalt oxides Co₃O₄
- Standard water oxidation catalyst (Iridium oxide, ruthenium oxide)
- PEM cell operates at high potentials (1.8 – 3 V)
- Stable operation and performance over time
- Stage of development: tested in laboratory.

Value Proposition
- Higher production rate of hydrogen than platinum based PEM cells
- Cobalt oxide is a commercially available, cheap and abundant material
- Attractive alternative for platinum replacement in PEM cell for hydrogen production
- PEM cells are portable devices.

Business opportunity/Market positioning
- PEM electrolysis is a growing alternative to alkaline electrolysis for hydrogen production, especially for small to medium commercial applications
- About 60 billion Nm³ per year hydrogen is produced by electrolysis (mostly alkaline)
- New market opportunities in mobility, power generation and industrial hydrogen are arising with the growth of electrolysis

Technology concept

Licensing Opportunity
- Partner for joint development and commercialisation of applications is sought.
- Global licensing rights are available.
- Regional licensing deals will be considered.
- Flexible licensing strategy related to development milestones.

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