

Press Release

Advent Technologies, Inc.
East Hartford, CT, USA
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Advent Technologies, Inc. Receives Japanese Patent for One of its Core High Temperature Membrane Technologies

EAST HARTFORD- NOVEMBER 21- Advent Technologies, Inc., a world leader in development of high temperature Membrane Electrode Assembly (MEA), today announced that the Japan Patent Office issued Advent a patent entitled “Development and characterization of novel proton conduction aromatic polyether type copolymers bearing main and side chain pyridine groups.” This patent, Patent No. 5324445 covers one of Advent's proprietary technologies of high temperature membrane. The issuance of the above patent further broadens the intellectual property portfolio and the market reach of Advent's products. Advent Technologies already has an issued patent for the above technology in US, and have two additional patent applications pending in various other regions of the world.

The quest for a durable and stable membrane which can operate efficiently at high temperatures has been the subject of research over the last decade by several research groups and industrial companies and it is one of the most critical components for the success of high-temperature PEM fuel cell. The above patent covers the method of preparing new aromatic copolymers bearing main and side chain polar pyridine units. These polymer exhibit good mechanical properties, high thermal and oxidative stability, high doping ability and high conductivity values which are all critical attributes for its adoption and application in high temperature PEM fuel cell.

Advent Technologies is involved in the development and manufacturing of High Temperature MEA technology for use in High Temperature PEM fuel cells and hydrogen clean up devices. The Advent's membrane is based on proprietary PBI free Advent TPS[®] polymer electrolytes (pyridine based polymers) that result in cost effective, high performing, and durable MEAs ideal for HT PEM fuel cells operating at temperatures between 150-220°C. Our product Advent TPS[®] has the distinction of performing at the highest temperature recorded for HT PEM MEA to this date worldwide.

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