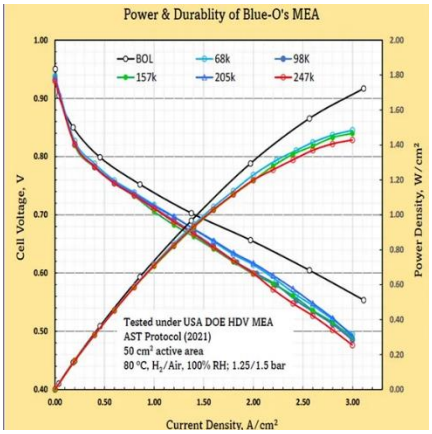
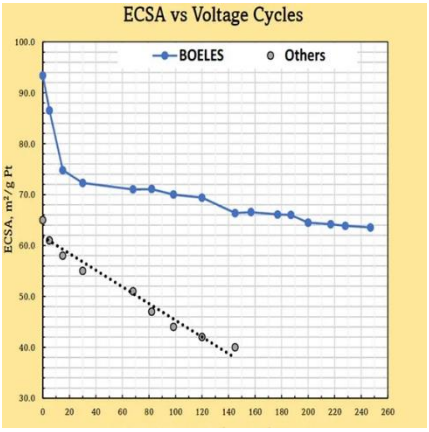
Blue-O Technology Inc.

Burnaby BC Canada www.blue-otechnology.com

Million Miles ELES Membrane Electrodes For eHDVs

Since hydrogen fuel cell electric vehicles for passengers back in 2008 by Daimler, due to the lack of refuel stations, such HFCEVs growth has been stalled up to now. The focus on heavy duty vehicles (HDV) powered by HFC has been pushed since 2018. The requirement for HDV has been much higher in sustained power and lifetime over 25,000 hours, while passenger HFCEV is about 5000 hours. Blue-O Tech had developed its first-generation membrane electrodes based on its novel EX5 electrocatalyst in 2019 that reached 25,000 hours lifetime. In 2021, Blue-O further developed an engineered layer structure electrode (ELSE) on PEM that generate electricity, which have shown a lifetime over 40,000 hours with sustained power output at 0.70 w/cm^2 at 0.70 V. These results have met fully of the current HDV electrification benchmarks of USA DOE HDV MEA.





During the progress, it was evidenced that the Electrochemcial active surface area (ECSA) change was plateaued. The stabled ECSA data support strongly the sustained power output. As the value was above 63 m^2/g, which is even higher than that of most comemrical MEAs, it is expected that a pfeasible 2X or 3X of million miles lifetime can be achieved.

Blue-O is looking for early adopters and co-developers with such most durable and potent MES for HDV, MDV, and LDVs applications. Please visit and support us at Hannover Messe Hall 13 at Booth 4 for combating together our climate change and protecting our lving earth.