ZAF Energy Systems Patents Anchored Electrolyte for Alkaline Batteries

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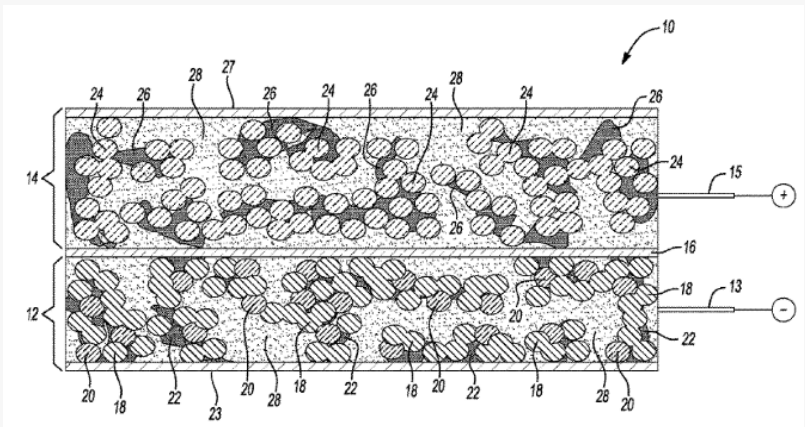

ZAF Anchored Electrolyte Alkaline Battery

JOPLIN, MO, UNITED STATES, February 10, 2022 /EINPresswire.com/ -- US Patent 11258103, titled "Zinc alkaline secondary battery including anchored electrolyte additives," will issue on the 22nd of February to ZAF Energy Systems Inc. (ZAF), a developer of next-generation zinc battery technologies. The patent will expand ZAF's IP portfolio to 14 United States patents and 16 overall.

ZAF's latest patent enables long-life zinc-based batteries by harnessing synergistic interactions between electrolyte and zinc electrode additives. The combination of additives chemically anchors the electrolyte to the electrode to suppress the redistribution and passivation of zinc, which have historically led to premature failures in zinc-based batteries. Utilizing the anchored electrolyte in Nickel-Zinc (Ni-Zn) batteries has led to cycle life gains of 21% and increased electrode utilization. The use of this chemistry has also allowed for an increase of active material in the zinc electrode, leading to a gain in energy density of 37% for the electrode. These results demonstrate that ZAF is revolutionizing the Ni-Zn chemistry.

> ZAF will continue to develop and refine both the chemistry and manufacturing processes of nickel-zinc to provide an alternative battery solution that will change the way we power the world."
>
> *Randy Moore*

When combined with advancements in cell design and manufacturing processes, ZAF's Ni-Zn battery will help smooth the path towards transitioning to safer and more environmentally friendly energy storage solutions. According to Randy Moore, President and CEO of ZAF Energy Systems, "ZAF will continue to develop and refine both the chemistry and manufacturing processes of nickel-zinc to provide an alternative battery solution that will change the way we power the world."

About ZAF Energy Systems, Inc.
Incorporated in 2011 with locations in Joplin, Missouri and Bozeman, Montana, ZAF Energy Systems develops and commercializes next-generation zinc battery technologies that use sustainable materials that can be safely and easily recycled. Its breakthrough battery technologies include Nickel-Zinc, Lithium-Zinc, and Zinc-Air. ZAF's primary and rechargeable batteries provide long-life and economical solutions in a safe package for a variety of applications. For more information, visit: www.zafsys.com

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