

ALUMINUM-ALKALINE METAL-METAL COMPOSITE CONDUCTOR

CRITICAL NEED

We have all seen or heard about them – sagging or downed high-voltage power lines caused by ice and wind storms. In addition to their mediocre strength, the aluminum-wrapped steel core in conventional power lines is also inefficient at conducting electricity.

TECHNOLOGY VISION

Ames Laboratory scientists have developed a method to produce an aluminum matrix wire composite with reduced density that adds strength to high-voltage wires while helping them retain maximum electrical conductivity at ambient and elevated temperatures.

POTENTIAL IMPACT

Taking advantage of simple and conventional manufacturing methods, industry could produce high-voltage power lines with high electrical conductivity and strength using low cost materials. Stronger cables could also reduce the number of towers needed to hold power lines.



Critical Materials Institute
AN ENERGY INNOVATION HUB



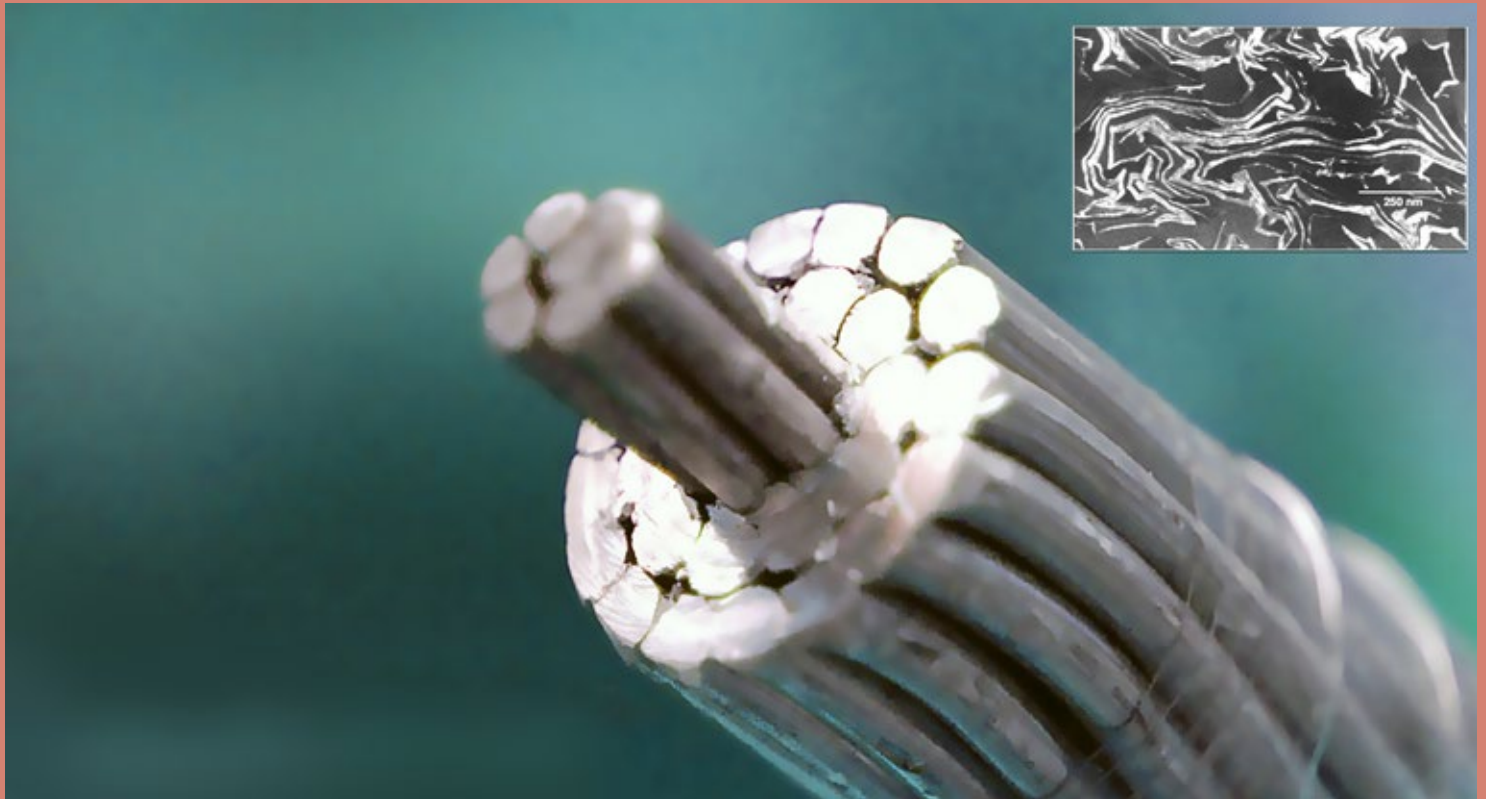
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