



From Science to Technology

Tesla Laboratories, Inc.

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health



National Institutes of Health Commercialization Assistance Program  
(NIH-CAP)

## Company Profile

**Industry Sector(s):** Environmental Remediation  
Toxin Mitigation  
Recycling

**Company Overview:** Tesla provides contract scientific and engineering support, customized modeling and simulation development, and is developing several technologies for commercialization. Tesla's versatile patent-pending water treatment technology (DEMET) removes dilute metals from waste streams and recovers them as saleable metal powder. It converts waste into a valuable resource.

**Target Market(s):** Metal Mining Industry (Active & Abandoned Mines)  
Metal Forming and Plating Industries  
Environmental Remediation Industry  
Recycling

**Target Metals:** Copper (initially), Cobalt, Nickel, Silver, Tin, and Zinc.

## Key Value Drivers

**Technology:** Tesla's novel "Green" electrowinning technology (**DEMET** – Dynamic Electrode Mine Effluent Treatment) removes/recovers hazardous and persistent metal contaminants from dilute sources like Acid Rock Drainage (ARD). The technology works with a variety of metals singly or in mixtures, can be used to treat a wide range of contaminant sources, and allows the practical removal and reclamation of low concentrations of metals in water that competing technologies can not address.

**Competitive Advantage:** **DEMET** exhibits better performance, higher removal rates, and is economically viable at low concentrations competing electrowinning technologies do not practically address. The metal reclamation achieved provides an economic incentive to treat sources currently allowed to contaminate the environment.

**Plan & Strategy:** A **DEMET** based copper recovery service market entry point is targeted to establish **DEMET** for added licensing and vendor businesses plus to create new growth opportunities addressing other metals: As, Ag, Co, Hg, Ni, Pb, Sn, and Zn.

\*Technology funded by the NIEHS and being commercialized under the NIH-CAP.

## Management

### Leadership:

**Dr. George Stejic, President** – Founded Tesla in 1997. He previously led Wired Business Inc.'s sales force as Vice President - Sales. Before that, Dr. Stejic spun-off and led Newton Technologies (a venture funded internet service amenity provider for real estate tenants) from Tesla, successfully procured access to 80 million sq. ft. of customers, and exited the business through the sale of Newton Technologies.

**Dr. Pat James, Vice President** – Previously Dr. James was Senior Scientist – Electrolytic Systems at Eltron Laboratories, Inc. At Tesla, he developed DEMET and is uniquely qualified to rapidly adapt it to new and specialized applications. He also maintains extensive target market contacts to support DEMET product, process, and fabrication elements of commercialization.

**Scientific Advisory Board:** None

## Product Development

- Tesla filed for patent protection (January, 2007).
- A prototype product 10 GPM **DEMET** unit constructed during Phase II demonstrates service condition operation, establishes the fundamental technology building block at sufficient size and technical maturity to verify real-world practical utility, and positions the technology for commercialization between 2010-2014.
- A short-term field demonstration of the prototype product has been arranged to validate **DEMET**, refine the business model, and prepare a marketing strategy.

### Commercialization:

- Copper heap leach effluent treatment is seen as a promising market entry niche.
- Discussions are underway with potential customers to perform scoping tests leading to partnering and full-scale long-term **DEMET** business unit (DBU) mine site tests.
- Additional (Private) funding is being pursued (via partnering and equity) to fund the full-scale system design and construction effort in parallel with customer procurement to move from demonstration to business development.