

# **Coolescence, LLC**

**Presented by Rick Cantwell**

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# Background

- Founded in 2005
  - Encouraged by 2004 DOE review & ICCF10
- Privately Funded by Angel Investor
- 2000 sq ft lab in Boulder CO, USA
- 3 research employees with engineering backgrounds
- Scientific consultants

# Glow Discharge Loading

Work inspired by

- Karabut
- Savvatimova
- Claytor
- Miley
- Energetic Technologies (ICCF10, Dardik, et al)
- Cecil & Liu
- Passell & Benson
- Oates and Flanagan, Can. J. Chem., **53**, 694 (1975)

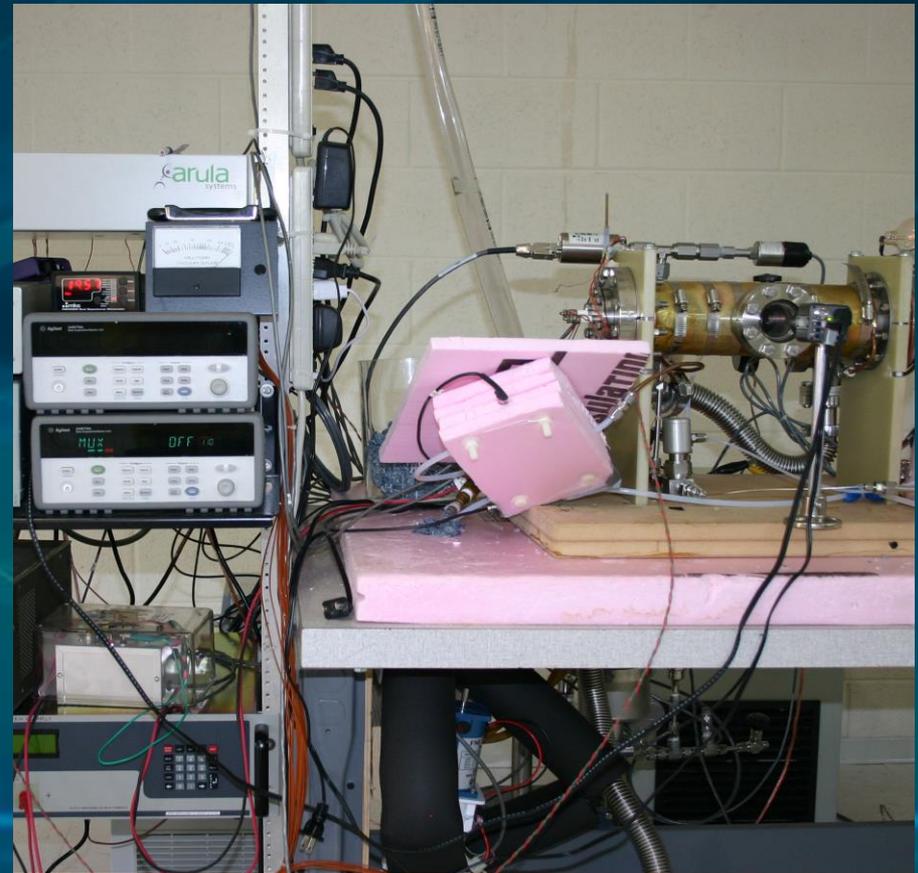
# Pd and Pd alloy films

- Films prepared by Colorado School of Mines
- Vacuum deposition/co-deposition
- Vary surface morphology & alloy chemistry
- Inspired by
  - Miles & Imam



# Lab Capabilities

- Flow Calorimeter Water Jacketed vacuum chamber – Sensitivity +/- 100mW
- Temperature Control -40 to +200 deg C
- Vacuum to 1E-6
- Multiple chamber test stand
- Automated data collection & video recording
- RGA



# Research Roadmap

- Repeatable and accurate calorimetry
- Loading studies of Pd foils
- Materials work with CSM informed by theory
- Excess Heat
- Repeatability & performance



# Thank You

- We appreciate the willingness of ISCMNS members to accept new researchers
- We appreciate the encouragement and advice we've received:
  - Ed Storms
  - Scott Little
  - Peter Hagelstein