

HEAT SPREADING MATERIALS FOR COOLING

HIGH POWERED, COMPLEX AND COMPACT ELECTRONICS

REDUCE ENERGY CONSUMPTION BY 30%, REDUCE MANUFACTURING COSTS UP TO 20%



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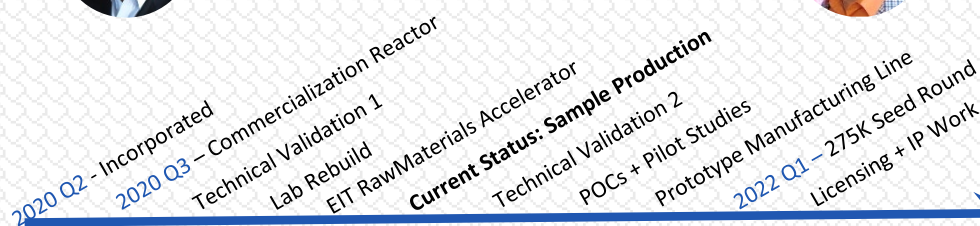
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Problem

Electronics produce heat and must be cooled. The rise of 5G telecommunications, the exponential growth of internet infrastructure and the e-mobility boom have created a tremendous demand for lighter, more compact, high performance electronics. The result is a growing market gap for new heat spreading materials.

Solution

HyMet has pioneered development of a new class of multi-layer composite thermal interface material which boasts an integrated heat spreader. Our materials can be used as replacement for many products, including graphenes, and open new possibilities in battery cooling, multi-chip and heat-pipe applications. Benchmark testing has demonstrated >30% reduction in energy consumption for processor applications and provides significant cost reductions of up to 20% as a result of the material composition alone.

Competitive Advantage

Our unfair advantage is that we make composites from existing materials, resulting in products that far outperform its constituent parts by 5X-10X, and provides new heat spreading characteristics. Our nearest competitors are primarily carbon based products with costs 100X higher and much slower manufacturing rates, making them impossible to use in mass production applications where margins are thinnest. HyMet materials are ready for application immediately.

Competitors: SHT Smart High Tech, CarbICE

Business Model + Strategy

Phase 1: POCs + pilot studies for market validation + revenue
Phase 2: Manufacturing Line to mature tech + increase sales
Phase 3: Partnerships to scale and distribute

End goal → Licensing, Merger & Acquisition

License Targets Include 3M, Indium Corp, HENKEL

Market

In 2019 over 3.5B USD were spent on polymer thermal interface materials. Top spenders by industry include computers, telecom and consumer goods, accounting for 63% of material consumption (1.4B USD). Rapid growth in the e-mobility sector will make it the top consumer within 5 years due to extensive use of high power batteries. Main drivers of these markets include weight reductions and increases in power density and, as a result, innovations in thermal management are highly sought after.

Funding

Prototron Request

15K for prototyping material manufacturing line

Raised to date:

50K PreSeed Round
15K EIT Accelerator Grants

Desired Seed Round: 275K

Revenue Forecast:

2021 – 15K
2022 – 150K

Successes:

Winner: Superangel BaseCamp
Winner: Deep Tech Atelier

Current Need:

Pilot Study Partners



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