

AMPHIONIC

amphionic.com

Principal Product Manager

Plymouth, MI (Hybrid / Remote flexibility after initial onboarding)

About Amphionic

Amphionic is a University of Michigan spinout at the frontier of nanomaterials science. We design and fabricate nanostructured materials that solve hard problems — lightweight radiation shielding, dual-particle radiation imaging, printable nanocomposites, and next-generation lightweight conductors — for applications in space, nuclear energy, nuclear medicine, and defense.

We are early-stage, well-credentialed, and moving fast. The scientists on our team hold PhDs in Electrical Engineering, Chemical Engineering and Nuclear Engineering. What we need now is someone who can translate what they build into products that matter — and help us find the right partners, customers, and markets to make that happen at scale.

The Opportunity

This is a founding-level product role. You will own the product function from the ground up — shaping how Amphionic thinks about what it builds, for whom, and why. You will work directly with our founders and technical team to bridge deep materials science capability with real-world customer and regulatory needs across space, nuclear power, nuclear medicine, decommissioning, and defense.

If you have spent your career in big companies wondering what it would be like to actually build something, this is that role. There is no playbook yet. You will write it.

What You'll Do

Define the Product Vision

- Develop and own a multi-year product roadmap across Amphionic's radiation shielding, detection, and imaging product lines.
- Conduct primary and secondary market research, voice-of-customer interviews, and competitive analysis across target sectors: space, nuclear utilities, nuclear medicine, decommissioning, and defense.
- Identify where Amphionic's materials science capabilities create genuinely defensible product differentiation — and ruthlessly prioritize around it.
- Surface new market opportunities and evaluate them against technical feasibility, regulatory landscape, and commercial readiness.

Drive Product Development

- Work shoulder-to-shoulder with our materials scientists, nuclear engineers, and fabrication team to translate customer and regulatory requirements into clear product specifications.
- Own the end-to-end product development process: concept, prototype, validation, and early customer deployment.
- Help establish the internal processes and tools Amphionic needs to scale from R&D output to reliable, repeatable product delivery.
- Ensure products are developed with nuclear, space, and radiation safety standards in mind from day one.

Lead Go-to-Market

- Build go-to-market strategy for each product line: target customer profiles, positioning, pricing frameworks, and channel approach.
- Develop the collateral, application engineering support, and technical narratives needed to engage sophisticated buyers in government and regulated industries.
- Work closely with leadership on partnership development, customer pilot programs, and early revenue opportunities.
- Represent the product and customer perspective inside the organization — and Amphionic's capabilities externally.

Navigate Regulatory Complexity

- Partner with our technical team and external regulatory experts to understand certification and compliance requirements for radiation and nuclear materials products.
- Help map the testing, certification, and licensing pathways relevant to our target markets.
- Stay current with evolving standards in radiation shielding and detection as they affect product design and market access.

What You Bring

Core Qualifications

- B.S. in a technical, scientific, or analytically rigorous field. We care more about how you think than where you studied — strong candidates have come from engineering, physical sciences, consulting, defense, and investment backgrounds.
- Meaningful experience owning technical products or programs through the full development and commercialization lifecycle — from early concept through customer deployment.
- Demonstrated ability to work across the boundary between deep technical teams and market-facing realities — translating between scientists, engineers, customers, and leadership without losing fidelity in either direction.
- Strong analytical instincts: comfortable with ambiguity, able to structure problems from scratch, and disciplined about prioritization.
- Excellent written and verbal communication — able to tailor technical depth to the audience, from PhD scientists to government procurement officers.
- U.S. citizenship required (given the nature of our markets and technology).

Strongly Desired

These are not gates. If you bring most of this, we want to talk.

- Experience in a highly regulated industry — space technology, nuclear energy, medical devices, advanced materials, or defense.
- Familiarity with radiation shielding or detection materials (e.g., lead alternatives, borated compounds, hydrogen-rich composites, semiconductor detectors).
- Working knowledge of certification, testing, or procurement requirements in nuclear or space contexts.
- Exposure to long-cycle B2B or B2G commercialization: government contracting, SBIR/STTR programs, regulated procurement, or technical partnership development.
- Existing relationships in any of our target sectors — nuclear utilities, space primes, national labs, government agencies, or nuclear medicine facilities.
- Advanced degree (Master's or PhD) in a relevant technical discipline.
- Prior startup or early-stage company experience.

What We Offer

- A genuinely rare chance to shape a deep-tech company from early stage — not a product management job in a large org, but actual product ownership.
- Direct collaboration with a world-class scientific founding team with deep domain expertise in nanomaterials and radiation physics.
- Work that matters: radiation safety, clean energy, and space applications with real humanitarian and national security significance.
- Competitive compensation commensurate with experience.
- Flexible, trust-based work arrangements after initial onboarding in Plymouth, MI.
- The opportunity to be in the room where the company's future is being decided — not executing someone else's roadmap.

Apply to:

Please send your resume and cover letter to: Info@amphionic.com

Website: www.amphionic.com