

Materiomics: Training students to become future-proof materials scientists

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In 2022–2023, Hasselt University launched the Master of Materiomics¹, a pioneering program dedicated to the design, development, and application of advanced materials. Rooted in materials science, the program prepares students to design sustainable and innovative materials at the intersection of chemistry and physics, through a combination of theoretical/computational modelling and experimental techniques². The master's program offers four specialization domains: Innovative materials for energy generation, storage, and efficiency, Sustainable materials for circular processes, Advanced materials for innovative health care, and High-tech materials for quantum technologies. Emphasizing interdisciplinary knowledge and collaboration, the curriculum bridges chemistry and physics to train materials scientists capable of addressing complex, real-world challenges. The demand for such highly skilled profiles is growing across industry and academia, including in strategic initiatives such as the Einstein Telescope. Graduates are equipped to tackle critical issues at the materials level, contributing to societal transitions such as the need for biomaterials, climate action, sustainable energy systems, high-tech health care, strong cybersecurity, and advanced space technologies. With this contribution, we aim to connect to both industry and academia to foster collaborations between the master's program and both domains.

References

1. <https://www.uhasselt.be/materiomics>
2. S. Doumen., *et al. TH&MA Hoger Onderwijs*. **3** (2023), 31.