



Adapted movie poster from "Fantastic Beasts and Where to Find Them". Source: Warner Bros. Pictures Inc. / Marta H. Wisniewska

Fantastic **MATERIALS** and Where to Find Them

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 3 credit points

From natural to synthetic, from nano to macro – materials are a source of inspiration and creativity. As an intrinsic component of good design, material knowledge helps create enduring surroundings from everyday objects to buildings. The wealth and variety of today's material world is the result of millennia of development, and new materials continually emerge. However, it can take decades for a breakthrough invention to move from the laboratory to the building site, and many creative alternatives often only find niche applications.

As the planet is facing enormous challenges, from housing shortages to dwindling resources and environmental degradation – the motivations, actors, technologies and the speed of the search for smart, carbon-free, healthy, circular, durable and/or affordable materials are changing greatly. Driven by a global understanding for the necessity of alternative solutions, hundreds of material industry startups appear every year – often supported by innovation funds, grants or private investors – offering potentially novel resources for architects, designers, engineers and users to redefine the way we design, build and live.

Questions of materiality in architectural project are oftentimes brought up too late in the design process. These considerations might even be driven by goals of making the existing design just "a bit more sustainable", "a bit more energy efficient", "a bit less wasteful", or "a bit nicer to the environment". In most cases, such a sequence of steps leave little room for innovation. An informed and material oriented design approach on the other hand might begin with a less marketed resource, consequently requiring a different mentality and determination, as well as an in-depth knowledge of current innovation in the wonderful world of materials.