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Mabelle Plasencia: Imposing scientific character to the catalog of building materials- Part 1 [1]

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Mabelle Plasencia

Mabelle Plasencia is the creator of **INmatteria** [3]**: a dissection of innovative materials**. After studying abroad at IAAC and an Architecture Degree from the Polytechnic University of Puerto Rico, her inclinations towards Materials Science, Technology and the effects of both into Architecture has been her most important focus. Her continuous research about materials and

innovation is shared through a scientific and architectural point of view. Currently writes for **Digicult**, an Italian site focused on digital art, design and culture.

How did your interest in materials come about?

It all started in 2010, while working on my Architectural thesis at Polytechnic University of Puerto Rico. I started investigating about smart materials in order to make my thesis a performative project, one that was interchangeable, with materials that react to climate, finding products such as Cronos Cronos, a concrete that emitted light, and radiant panels that eliminated the use of heavy mechanical systems. From that moment on, my mind opened up to the world of materials in small doses which led to applied recycled rubber to a continuous surface, which created playful areas, public furniture, luminaire posts and walls. Not exactly a smart material, but as a by-product, it suited perfectly for the natural landscape site located in New York's Central Park. Although I wish I had the knowledge on materials I possess today, but that is one of the reasons that led me to become a writer about materials and innovation.

2. What do you think about architecture as a profession with scientific input?

Based on my researches, I have encountered that science provides us with a great amount of information that can help us understand our basic materials and use them on our favor by creating a by-product, composite or smart material. An architectural project based on built ecologies exposes and explodes concepts such as biophilia and biomimicry as scientific sources that embrace simple, yet unabsorbed terms in society such as sustainability and eco-friendly architecture. Although it is deemed to be an expensive design processes, I believe that there are options that can provide biophilic environments at a reasonable cost, for which many of them are already under investigation; not only by Materials Scientists but also Architects and Engineers who are seeking for better performing solutions for building faster, with less or no contamination with a synergistic system.

3. If you could come up with a great team to develop new materials or put to test under-rated materials, what professions would form this team?

Well as an Architect, I understand we are capable of understanding materials to the extent of our design intentions, but we certainly have to add into the equation, materials engineers and scientists, as well as biologist for the matter of understanding a specific organism that might represent the objective we are looking for.Nonetheless, there is more to it; laboratories are required for testing materials in order to obtain a patent for marketing distribution, and almost become yourself a manufacturer of this new material to understand and explain the standard procedure of handling and use. For an Architect this represents a leave from the office and spending time at machine shops and laboratories, something not in the A list for many Architects.

Based on your ongoing research, which are your favorite materials and why?

Everyday I search, read and store any article regarding innovative materials and explorations performed by either scientists or students in all aspects of design, either product design, industrial design or Architecture. I could say that Mycelium plastics, a fungi product, have gotten me on a hold because of how fast you can grow a material that can replace foam and plastics for

packaging design. Hemp products also have shocking properties that must be exploited in all aspects (medicinal, in construction, for cooking and consumption), on behalf of a steady economy and small businesses as this plant has extensive potential in construction, product design and consumer products. Under mineral category I could point to graphite's derivate, graphene, one of the strongest materials today, being three times stronger than steel but as light as a feather, reason for which scientists call it frozen smoke.



You are the principle founder and creator of INmatteria, a dissection of innovative materials. What is the concept behind this? Where do you want it to go?

INmatteria grows after the constant desire for learning about materials and become a professional in the matter. After finishing my BA in Architecture, I gained experience at local architectural and engineering offices noticing that the topic about materials and innovation in technology is barely touched. Consequently, this embraced my interest towards innovative materials and technologies without knowing exactly which direction to head on this broad topic. Interior Designer and partner, Eduardo López, came up with the suggestion that I should blog about it and so I took the chance and started investigating, finding an outstanding world of ideas, creativity and productive future around an array of people with the same interests.

INmatteria is a web-space designed intentionally for people interested on materials in all aspects of creation, a space where I expose personal thoughts about certain products and technologies with a brief dissection of each material embedded on every article. The site is classified according to kinds of materials such as metals, ceramics, polymers, organics, by-products, composites and including smart materials under advanced materials. As I grow learning on this world of materials it is my desire and purpose to extend my knowledge to all readers who wish to learn, comment, suggest or collaborate. It is a long journey, as materials keep evolving, but promises to be full of knowledge and amazing experiences, all to be shared through **INmatteria**.

INMATERIA

A DISSECTION OF INNOVATIVE MATERIALS

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