The Italian energy materials acceleration platform (IEMAP)

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Accelerating materials discovery is of utmost importance for the realization of several emergent technologies, particularly to combat climate change through the adoption of zero emission technologies. One method for accelerating materials discovery is given by the integration of artificial intelligence and high performance computing methods in the computational and experimental research lines. Indeed, Artificial Intelligence is able to minimize the number of experiments necessary to understand the right chemical composition of materials for a selected final application. Advanced approaches can consider also, from the beginning, the sustainability considerations, multiscale implementations, and performance of the final devices. The accelerated discovery calls for synergies among experimentalists, numerical modeler, computer scientists and final users. The IEMAP project (Italian Energy Materials Acceleration Platform) aims to implement an Italian Material Acceleration Platform gathering the efforts of the Italian research institutions.