Two prestigious Research Associate Positions are available at the Section of Chemistry for Technologies in the Department of Industrial Engineering of the University of Padova, Italy, to carry out R&D activity in the field of the development of advanced functional components (i.e., ion-exchange membranes, redox couples and electrode configurations) and system architectures for application in redox flow batteries. The positions last for 12 months, extendable to 24 months.

The R&D activities will be carried out in the framework of a collaboration between the research group “Chemistry of Materials for the Metamorphosis and the Storage of Energy – CheMaMSE” (http://www.chimica.unipd.it/lab_DiNoto/), coordinated by Prof. Vito Di Noto, and major Italian and international industries.

Redox flow batteries are devices able to store large amounts of electrical energy; they are characterized by an outstanding conversion efficiency and an excellent cyclability. Redox flow batteries are typically coupled with energy conversion systems exploiting intermittent renewable sources (e.g. the sun and the wind), ensuring the constant availability of the harnessed energy.

The Research Associate will develop new advanced functional components and system architectures for redox flow batteries. He/she will implement the products of the research to devise small-scale prototypes. The latter will be tested in operative conditions to evaluate their applicability in industrial products. The Research Associate will experiment with advanced functional components suitable for both aqueous and non-aqueous environments, in an effort to raise the energy density and cyclability of the devices beyond the state of the art.

Requirements: The Research Associate shall hold a Master’s degree, preferably in Chemistry, Industrial Chemistry, Chemical Engineering or similar subjects. A Ph.D. degree in the same disciplines is preferred. The Research Associate must be highly motivated, flexible, able to meet deadlines and work in a team.

For further information, please contact the coordinator of the “CheMaMSE” Research Group, Prof. Vito Di Noto. Phone: +39 049 8275229; E-mail: vito.dinoto@unipd.it.