

Andrea Cadeddu

Full-Stack Developer and Material Scientist

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Chicago, IL 60606 USA	Personal Email: cadedduan@gmail.com
Date of Birth: October 21, 1982	<i>Other Languages: (CEFR)</i>
Citizenship: Italy	Spanish C1, English C2, French C1, Catalan A2.
Status: H1B - EAD (currently processing EB-2)	

Current Position

Full-Stack Developer, Hyatt Hotels Corporation, since April 2014.

Education

Ph.D. Physical Chemistry, Institut de Science et d'Ingénierie Supramoléculaires (ISIS), Université de Strasbourg , 17 December 2012.

Thesis: Supramolecular Scaffolding at the Nanoscale: Functional Architectures for Organic Electronics

Grant: FP7 - Marie Curie Initial Training Network (ITN) SUPERIOR - SUPramolEculaR functional nanoscale architectures for Organic electronics: a multi-site initial training action

Secondment in APE RESEARCH Trieste Italy, February 2010

Setup, test and development of a Scanning Differential Tunneling Microscope

M.Sc Material Science, University of Cagliari , 2008.

Thesis: Nanocrystals Colloidal Synthesis for IR Optoelectronics

Honors: Summa Cum Laude

Erasmus exchange: Universitat Autònoma de Barcelona (UAB), fall 2007

B.Sc Material Science University of Milan Bicocca, 2006.

Thesis: Hybrid Organic-Inorganic materials for Multiphotonics

Skills

JavaScript, Python, Java, Html5, CSS, Node, Angular, React, Vagrant, Puppet, Adobe AEM/CQ.
some Clojure, some Haskell.

Research Fields

Machine Learning, Chemical Networks, Nanochemistry, Scanning Tunneling Microscopy, Physical Chemistry, 2D Covalent Organic Frameworks, Scanning Differential Tunneling Microscopy, Molecular Dynamics;

Research

Chemistry as a Natural Language.

Machine-Learning Retrosynthesis.

Professional Activities

Chematica Lead Software Engineer and Post Doctoral Fellow , Northwestern University, Non Equilibrium Research Center, Evanston IL, USA. February 2013 - April 2014.

Domtree.net - hackaton 2013 - graph rapresentation of DOM structure of URLs

Messa in opera di un apparato per la sintesi di nanocristalli colloidali, in particolare di quelli a base di Solfuro di Piombo, Seed Projects - INFM Call for Young Research. INFM:CNR Cagliari University may-october 2009.

Publications:

Atomically Precise Prediction of 2D Self-Assembly of Weakly Bonded Nanostructures: STM Insight into Concentration-Dependent Architectures. Small 2015.

Organic chemistry as a language and the implications of chemical linguistics for structural and retrosynthetic analyses. Angewandte Chemie, Volume 126, Issue 31, pages 8246-8250, July 28, 2014

Concentration Dependent Supramolecular Engineering of H-bonded Nanostructures at Surfaces: Predicting Self-assembly in 2D. Journal of the American Chemical Society 2013. doi:10.1021/ja4002025.

Modulating the self-assembly of rigid clicked dendrimers at the solid-liquid interface, Chemical Communications, 2011, 47, 10578-10580.

Self-templating 2D supramolecular networks: a new avenue to reach control over a bilayer formation, Nanoscale, 2011, 3, 4125-4129.

Last updated: February 9, 2016