



AVVISO DI SEMINARIO

Martedì 27 aprile alle ore 11:30

in aula B2

il Dr. Antonio Agresti

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CHOSE (Center for Hybrid and Organic Solar Energy)
Dipartimento di Ingegneria Elettronica, Università degli Studi di Roma "Tor Vergata"

Terrà un seminario dal titolo:

**“Fotovoltaico di nuova generazione: dagli
assorbitori a colorante alle perovskiti”**

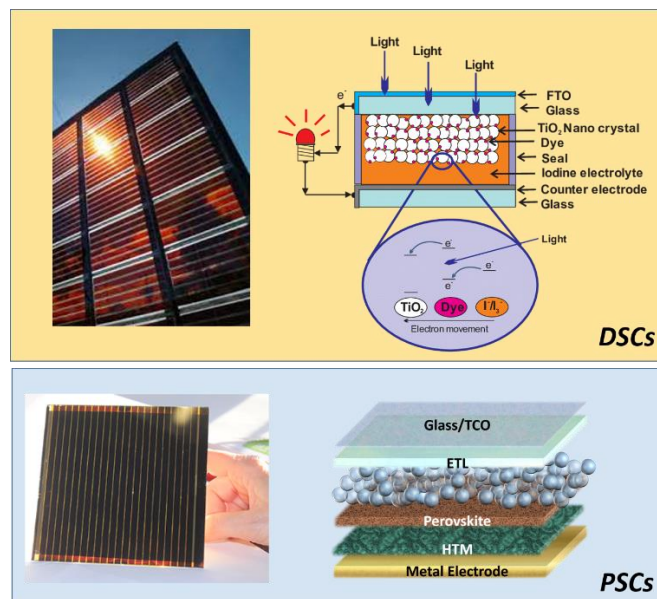
Proponente: Prof. Cristina Cornaro

<https://teams.microsoft.com/l/meetup-join/19%3af3771786c8064f3d8377d8a08701e1a9%40thread.tacv2/1619422538096?context=%7b%22Tid%22%3a%2224c5be2a-d764-40c5-9975-82d08ae47d0e%22%2c%22Oid%22%3a%228a840456-8bd4-4d48-8731-15a88377359e%22%7d>



Abstract

Recently, the increasing energy demand pushes the scientific community in developing new technologies for the exploitation of the renewable energy sources. As the matter of fact, the world total energy consumption was estimated 153.000 TWh in 2019, increased more than 15% in the last 15 years. In this context, solar energy is the best candidate for satisfying the human being request, since the amount of theoretically exploitable solar energy, which in a year invests the earth's surface is equal to 3.8 YJ. Indeed, in the last decades, new generation photovoltaics promised power conversion efficiency (PCE) comparable to those of silicon photovoltaics by guaranteeing low production costs. In this regards, hybrid photovoltaic technologies such as Dye Sensitized Solar Cells (DSCs) and most recently Perovskite Solar Cells (PSCs) dominated the PV scientific research, by developing efficient and stable devices, produced by employing scalable and low-cost printing techniques, easily embedded in roll2roll or sheet2sheet production lines. Moreover, hybrid PV technologies can be exploited for niche markets such as wearable electronics, indoor power generation, building integrated facades, photovoltaic greenhouses, unmanned aerial vehicle (UVA), sensors and many others. If on one hand DSC technology is now already a reality on the PV market, on the other hand PSC technology still requires to demonstrate the transfer from lab to fab, pushing the scientific community in finding brilliant solution for drawing a feasible and reliable route toward its commercialization.



Biography



Antonio Agresti is assistant professor at the Department of Electronic Engineering at the University of Rome Tor Vergata since 2016. His research activity mainly concerns the design, engineering, fabrication and electrical/spectroscopic characterization of hybrid and organic solar cells, the use of graphene, transition metal dichalcogenides and emerging bi-dimensional materials such as MXenes for perovskite solar cells, tandem devices, large area modules and panels. He authored/co-authored more than 40 publications and he has participated as invited speaker to several conferences in the renewable energy field. He is currently involved as deputy leader of Horizon 2020 Spear-Head 5- Graphene Core3 project.