

Maurizio De Crescenzi was born in 1951 in Rome (Italy). Thesis "cum laude" in Solid State Physics (November 1975) at University of Rome "La Sapienza" (Italy). He is full professor from 1990 and from 2001 he has a chair of Structure of Matter at University of Rome "Tor Vergata" (Italy). His research activity has been focused on the study of the structural and electronic properties of clean surfaces, metallic clusters and of metal/semiconductor interfaces by using spectroscopic techniques such as Auger, LEED, XPS and Energy Loss. He has investigated the growth of nanostructures of Germanium/Silicon and Fe/Cu/Si ultrathin films through MBE process. Recently he has synthesized nanotubes of carbon and other materials and they have been investigated through STM and TEM microscopy and photocurrent measurements. He has demonstrated that carbon nanotubes can be used as efficient photon sensitive devices. He has assessed for the first time the existence of silicon nanotubes. He has participated to several European Projects (Esprit, Science, Human Capital and Mobility) to develop new nanosized materials. He is co-author of more than 250 international publications (his H index is 34), one book on electron and structural spectroscopies and several books on nanostructures acting as editor. He has organized several National and International Conferences on surfaces and nanostructures (NanoSEA2006, NanoSEA2008, NanoSEA2010 e NanoSEA2012). He is in the board of editors of four international Reviews (Nature Scientific Reports, Journal of Electron Spectroscopy, Journal of Physics (Condensed Matter), Surface Review and Letters). He has acted twice (for 2006 and 2007) as international referee for the ANR (Agence Nationale de la Recherche) (France) as European expert in nanotechnology. In November 2009 he has received the title of Doctor "Honoris Causa" in Physical Science awarded by the University of Aix-Marseille (France).

- 1) "Regioregular poly(3-hexyl-thiophene) helical self-organization on carbon nanotubes"
M.Giulianini, E.R. Waclawik, J. M. Bell, M. Scarselli, P. Castrucci, M.De Crescenzi, N. Motta
Applied Physics Letters **95**, 013304-013306 (2009).
- 2) "Influence of Cu nanoparticle size on the photo-electrochemical response from Cu-multiwall carbon nanotube composites. M.Scarselli, P.Castrucci, L.Camilli, S.DelGobbo, S.Casciardi, F.Tombolini, E.Gatto, M.Venanzi, M.De Crescenzi.
Nanotechnology **22**, 035701-035708 (2011).
- 3) "Light harvesting with multiwall carbon nanotube/silicon heterojunctions"
P.Castrucci, C.Scilletta, S. Del Gobbo, M. Scarselli, L. Camilli, M. Simeoni, B. Delley, A. Continenza, M.De Crescenzi,
Nanotechnology **22**, 115701-115707 (2011).
- 4) "Electronic and optoelectronic nano-devices based on carbon nanotubes"
M.Scarselli, P.Castrucci, M.De Crescenzi,
Journal of Physics (Condensed Matter) **24**, 313202 (36) (2012)
- 5) "Strain analysis of noble metal islands grown on multiwalled carbon nanotubes"
S.Scarselli, L.Camilli, L.Persichetti, P.Castrucci, S.Lefrant, E.Gautron, M.De Crescenzi,
Carbon **50**, 3616-3621 (2012).

- 6) "Enhanced UV photoresponse of KrF-laser-synthesized single-wall carbon nanotubes/n- silicon hybrid photovoltaic devices"
V.Le Borgne, L.A.Gautier, P.Castrucci, S.Del Gobbo, M.De Crescenzi, M.Ali El Khakani,
Nanotechnology **23**, 215206 (2012).
- 7) "Structural, electronic and photovoltaic characterization of multiwalled carbon nanotubes grown directly on stainless steel"
L.Camilli, M.Scarselli, S.Del Gobbo, P.Castrucci, E.Gautron, M.De Crescenzi,
Beilstein Journal of Nanotechnology **3**, 360-367 (2012)
- 8) "In situ formation of noble metal nanoparticles on multiwalled carbon nanotubes and its implication in metal-nanotube interactions"
M.Scarselli, L.Camilli, P.castrucci, F.Nanni, S.Del Gobbo, E.Gautron, S.Lefrant, M.De Crescenzi,
Carbon **50**, 875-884 (2012)
- 9) "High coercivity of iron-filled carbon nanotubes synthesized on austenitic stainless steel "
L.Camilli, M.Scarselli, S.Del Gobbo, F.R.Lamastra, F.Nanni, E.Gautron, S.Lefrant,
F.D'Orazio, F.Lucari, M.De Crescenzi,
Carbon **50**, 718-721 (2012)
- 10) "Photoresponse from noble metal nanoparticles-multi walled carbon nanotube composites"
M. Scarselli, L. Camilli, L. Matthes, O. Pulci, P. Castrucci, E. Gatto, M. Venanzi, M. De Crescenzi
Applied Physics Letters **101**, 241113 (2012)