CURRICULUM VITAE

INFORMAZIONI PERSONALI

Nome	**Roberto Boscaino**
Data di nascita	**29/07/1945**
Qualifica	**Professore Ordinario**
Amministrazione	**Università degli Studi - Palermo**
Incarico attuale	**Preside della Facoltà di Scienze MM.FF.NN.**
Numero telefonico dell'ufficio	**091 238 61401**
Fax dell'ufficio	**091 238 60726**
E-mail istituzionale	**preside.scienzemmffnn@unipa.it**

TITOLI DI STUDIO E PROFESSIONALI ED ESPERIENZE LAVORATIVE

Titolo di studio	Laurea in Fisica (Università di Palermo, 1967)
Posizioni accademiche	1968-1970 Assistente Incaricato di Fisica Generale 1972-1982 Professore Incaricato, Università di Palermo 1982 -1990 Professore Associato, Università di Palermo 1990 – 1993 Professore Straordinario, Università di Cagliari 1994 - oggi Professore Ordinario di Fisica Sperimentale, Università di Palermo
Incarichi accademici	1994 -2000 Direttore del Dipartimento di Scienze Fisiche 2007 – oggi Preside della Facoltà di Scienze MM.FF.NN.
Aree di competenza scientifica	materiali amorfi (fenomenologia, proprietà strutturali, danni da radiazione interazione radiazione-materia (effetto della statistica della radiazione sui processi multifotonici) rilassamento di spin in solidi (decadimento anomalo dei regimi transitori nei solidi a bassa temperatura) fluttuazioni nei decadimenti radioattivi (processi non stazionari e rumore 1/f); dinamica complessa (autooscillazioni e caos in sistemi ferrimagnetici).

Capacità linguistiche

Lingua	Livello Parlato	Livello Scritto
Inglese	sufficiente	buono
Francese	sufficiente	buono

Capacità nell'uso delle tecnologie

Spettroscopia di risonanza magnetica
Spettroscopia IR, visibile, vacuum-UV
Tecniche criogeniche

Elenco delle pubblicazioni scientifiche 2008 -2012:

. Alessi, S. Agnello, F. M. Gelardi, S. Grandi, A. Magistris, and R. Boscaino:
Twofold coordinated Ge defects induced by gamma-ray irradiation in Ge-doped SiO2
OPTICS EXPRESS, 16, 7, 4895-4900 (2008)

L. Vaccaro, M. Cannas, R. Boscaino
Luminescence features of nonbridging oxygen hole centres in silica probed by site-selective excitation with tunable laser
Solid State Communications 146 (2008) 148–151

L. Vaccaro, M. Cannas, R. Boscaino
Phonon coupling of non-bridging oxygen hole center with the silica environment: Temperature dependence of the 1.9 eV emission spectra
Journal of Luminescence 128 (2008) 1132–1136

S. Agnello, A. Alessi, F.M. Gelardi, R. Boscaino, A. Parlato, S. Grandi and A. Magistris
Effect of oxygen deficiency on the radiation sensitivity of sol-gel Ge-doped amorphous SiO2
Eur. Phys. J. B 61, 25–31 (2008)

F Messina, M Cannas and R Boscaino
Generation of defects in amorphous SiO2 assisted by two-step absorption on impurity sites
J. Phys.: Condens. Matter 20 (2008) 275210 - 5

S. Agnello, G. Buscarino, F. M. Gelardi, and R. Boscaino
Optical absorption band at 5.8 eV associated with the E'_{γ} centres in amorphous silicon dioxide: Optical absorption and EPR measurements
PHYSICAL REVIEW B 77, 195206-1-7 (2008)

G. Buscarino, R. Boscaino, S. Agnello, and F. M. Gelardi
Optical absorption and electron paramagnetic resonance of the E'alpha center in amorphous silicon dioxide
PHYSICAL REVIEW B 77, 155214_1-5 (2008)

E. Vella, R. Boscaino, and G. Navarra
Vacuum-ultraviolet absorption of amorphous SiO2: Intrinsic contribution and role of silanol groups
PHYSICAL REVIEW B 77, 165203 _1-6 (2008)

L. Vaccaro, M. Cannas, V. Radzig, and R. Boscaino
Luminescence of the surface nonbridging oxygen hole center in silica: Spectral and decay properties
PHYSICAL REVIEW B 78, 075421_1-6 (2008)

L Nuccio, S Agnello and R Boscaino
Annealing of radiation induced oxygen deficient point defects in amorphous silicon dioxide: evidence for a distribution of the reaction activation energies
J. Phys.: Condens. Matter 20 (2008) 385215 (8pp)

A. Alessi, S. Agnello, F. M. Gelardi, R. Boscaino
Ge-doping dependance of gamma-ray induced germanium lone pair centers in Ge-doped silica
p hys. stat. sol. (b) 245, No. 10, 2128–2131 (2008)

L.Nuccio, S. Agnello, R. Boscaino
Intrinsic generation of OH groups in dry silicon dioxide upon thermal treatments
APPLIED PHYSICS LETTERS 93, 151906 (2008)

E. Vella, R. Boscaino
Structural disorder and silanol groups content in amorphous SiO2
PHYSICAL REVIEW B 79, 085204 (2009)

M. D'Amico, F.Messina, M. Cannas, M.Leone, R. Boscaino
Photoluminescence spectral dispersion as a probe of structural inhomogeneity in silica
J. Phys.: Condens. Matter 21 (2009) 115803 (7pp)

M. D'Amico, F. Messina, M. Cannas, M. Leone, R. Boscaino
Inhomogeneous width of oxygen-deficient centers induced by electron irradiation of silica
PHYSICAL REVIEW B 79, 064203 (2009)

S.Girard, Y. Ouerdane, G. Origlio, C. Marcandella, A. Boukenter, N. Richard, J. Baggio, P. Paillet, M. Cannas, J. Bisutti, J.P. Meunier, R. Boscaino
Radiation Effects on Silica-Based Preforms and Optical Fibers—I: Experimental Study With Canonical Samples
IEEE TRANSACTIONS ON NUCLEAR SCIENCE, VOL. 55, NO. 6, 3473-3482 (2008)

Girard, N. Richard, Y. Ouerdane, G. Origlio, A. Boukenter, L. Martin-Samos, P. Paillet, J.-P. Meunier, J. Baggio, M. Cannas, and R. Boscaino
Radiation Effects on Silica-Based Preforms and Optical Fibers-II: Coupling Ab inizio Simulations and Experiments
IEEE TRANSACTIONS ON NUCLEAR SCIENCE, VOL. 55, NO. 6, 3508-3514 (2008)

M. D'Amico, F. Messina, M. Cannas, M. Leone, R. Boscaino
Isoelectronic Series of Oxygen Deficient Centers in Silica: Experimental Estimation of Homogeneous and Inhomogeneous Spectral Widths
J. Phys. Chem. A 2008, 112, 12104–12108

L. Nuccio, S. Agnello, R. Boscaino
Role of H_2O in the thermal annealing of the E'γ center in amorphous silicon dioxide
PHYSICAL REVIEW B 79**,** 125205-1-8 (2009)

G.Navarra, E.Vella, S.Grandi, M.Leone, R. Boscaino
Temperature effects on the IR absorption bands of hydroxyl and deuteroxyl groups in amorphous silica glass
J.Non-Cryst.Solids 355 (2009) 1028–1033

G. Origlio, S. Girard, M. Cannas, Y. Ouerdane, R. Boscaino, A. Boukenter
Paramagnetic germanium-related centers induced by energetic radiation in optical fibers and preforms
J.Non-Cryst.Solids 355 (2009) 1054–1056

L. Nuccio, S. Agnello, R. Boscaino, B. Brichard
Effects of high pressure thermal treatments in Oxygen and Helium atmospheres on amorphous silicon dioxide and I ts radiation hardness
J.Non-Cryst.Solids 355 (2009) 1046–1049

Buscarino, G., Agnello, S., Gelardi, F.M., & Boscaino, R.
The role of impurities in the irradiation induced densification of amorphous SiO2
Journal of Physics: Condensed Matter, 22, 255403. (2010).

F. Messina, E. Vella, M. Cannas, R. Boscaino,
Evidence of Delocalized Excitons in Amorphous Solids
Phys. Rev. Lett. 105, 116401 (2010)

Eleonora Vella, Fabrizio Messina,* Marco Cannas, and Roberto Boscaino
Unraveling exciton dynamics in amorphous silicon dioxide: Interpretation of the optical features from 8 to 11 eV
PHYSICAL REVIEW B 83, 174201-1 -8 (2011)

E. Vella, G. Navarra, R. Boscaino:
Temperature dependence of the absorption properties of silanol groups in amorphous SiO2: Are silanol groups organized in clusters?
Solid State Communications 151 (, pp. 306-311. ISSN: 0038-1098 2011)

G. Buscarino, E. Vella, G. Navarra, R. Boscaino.
A two-component model for the 2260 cm-1 infrared absorption band in electron irradiated amorphous SiO2. Journal of Non-Crystalline Solids 357 (2011), pp.1926-1930.

S. Agnello, G. Iovino, G. Buscarino, R. Boscaino, F. Costa
Effects of thermal treatments in controlled atmosphere on the Ce oxidation state in Ce–Ti-Eu doped SiO2 sol–gel glasses
J Sol-Gel Sci Technol 58:56–61(2011)

S. Agnello, M. Cannas, L. Vaccaro, G. Vaccaro, F. M. Gelardi, M. Leone, V. Militello, R. Boscaino
Near-Infrared Emission of O2 Embedded in Amorphous SiO2 Nanoparticles
J. Phys. Chem. C 2011, 115, 12831–12835

Girard, S., Ouerdane, Y., Richard, N., Boukenter, A., Cannas, M., & Boscaino, R. (2011).
Approche couplée pour le développement de matériaux optiques résistants aux radiations.
EDP Sciences, UVX 2010, 69-75 (2011)

E. Vella, G. Buscarino, G. Vaccaro and R. Boscaino
Structural organization of silanol and silicon hydride groups in the amorphous silicon dioxide network
Eur. Phys. J. B 83, 47–52 (2011) DOI: 10.1140/epjb/e2011-20201-4

155. G. Iovino, S. Agnello,* F. M. Gelardi, and R. Boscaino
O2 Diffusion in Amorphous SiO2 Nanoparticles Probed by Outgassing
The J. of Phys.Chem. C 2012, 116, 11351−11356

BREVETTI

Agnello, S., Boscaino, R., Cannas, M., Gelardi, F.M., > Leone, M., & Militello, V. (2010).
Brevetto No. RM2010A000174.