



PERSONAL INFORMATION

Name, Surname **Michele Dondi**
 Address CNR-ISTEC, via Granarolo 64, 48018 Faenza, Italy
 Telephone +39 0546699728
 Fax +39 054646381
 E-mail michele.dondi@istec.cnr.it
 Website www.istec.cnr.it
 Nationality Italian
 Place and Date of birth Bologna, 06-07-1961

PROFESSIONAL INFORMATION

OrcID: 0000-0001-6606-1146
 WoS Researcher ID: B-7623-2015
 Scopus Author ID: 7005774023
 Google Scholar ID: <http://scholar.google.it/citations?user=eKtiZaUAAAAJ&hl=it>
 CNR-ISTEC: <http://www.istec.cnr.it/index.php/personale/9-ricercatori-tecnologi/49-dondi-michele>
 Research Gate: https://www.researchgate.net/profile/Michele_Dondi

WORK EXPERIENCE

Dates (from – to) 1989 - Present
 Name of employer Consiglio Nazionale delle Ricerche
 ISTEC (Istituto di Scienza e Tecnologia dei Materiali Ceramici) Faenza
 Type of business or sector Research
 Occupation or position held Head researcher
 Main activities Research and development
 Career Researcher since 1988, Head Researcher since 2001, Research Manager since 2010 at ISTEC Faenza

EDUCATION AND TRAINING

Dates (from – to) 1981-1985
 Name and type of organisation providing education and training University of Bologna
 Principal subjects covered M.Sc. graduation in Geological Sciences discussing a thesis on *Mineralogical and petrographic study of pelitic levels in the "Lolano Series" from the Northern Apennines, Italy* (110/110 cum laude)
 Title of qualification awarded M.Sc. degree in Geological Sciences

Languages spoken
 (Common European Framework of Reference for Languages)

Language	Comprehension		Spoken		Written
	Listening	Reading	Oral interaction	Oral production	Written production
Italiano	C2	C2	C2	C2	C2
English	B2	C1	B2	B2	C1
Português	B2	C1	B2	B2	B2
Español	B2	C1	B2	B2	B2
Français	B1	B2	B1	A2	B1

Scientific competences Theoretical and experimental knowledge on design, execution and data interpretation of the following techniques: X-ray Diffraction and Rietveld refinement (XRPD); Optical Spectroscopy (UV-visible-NIR); Scanning Electron Microscopy (SEM); X-ray Fluorescence Spectrometry (XRF-WDS, XRF-EDS); Inductively-Coupled Plasma Optical Emission Spectroscopy (ICP-OES); Thermo-Gravimetric (TGA) and Thermo-Differential (TDA) analyses; Differential Scanning Calorimetry (DSC); Thermo-Dilatometric analyses (TDA); Hot-Stage Microscopy (HSM); Particle size distribution (X-ray Sedigraph); Specific surface area (BET); Technological testing for physical, mechanical-tribological and functional performances; Laboratory simulation of industrial manufacturing processes for ceramic tiles, clay bricks and roof tiles, sanitaryware and tableware, refractory and technical ceramics.

RESEARCH ACTIVITIES

Research sectors	Materials Engineering, Raw Materials, Ceramic Materials, Applied Mineralogy
Scientific subjects	Michele Dondi's scientific activity is particularly focused on the behaviour of raw materials, properties of ceramic materials, and product and process innovation. Fields of interest are: <ul style="list-style-type: none">• Product and process innovation with particular emphasis on ceramic pigments and glazes, wall and floor tiles, bricks and roof tiles, refractory and technical ceramics.• Exploitation and characterization of ceramic raw materials, including recycling of industrial wastes and byproducts.• Raw materials and technological properties relationships, modelling the dependence of semi-finished and finished products performances on process conditions and composition of raw materials.• New materials for the ceramic industry: research and development particularly of ceramic pigments, inks and glazes.• Development of methods and procedures specifically dedicated to the traditional ceramics sector.
Main R&D programmes	PRIN 2017 - Programmi di Ricerca Scientifica di Rilevante Interesse Nazionale. Progetto "Mineral Reactivity in Large-scale Processes (MiReLaP)", 2019-2022 (PM).
PM = Project Manager	INVOLUCRO – Materiali ceramici per l'involucro edilizio ad elevate prestazioni termo-igrometriche. Progetto POR-FESR Regione Emilia-Romagna, 2017-2019 (P).
P = participant to the project	IPERCER – Innovazione di processo per la filiera della piastrella ceramica sostenibile. Progetto POR-FESR Regione Emilia-Romagna, 2016-2018 (PM).
	MATER_SOS – Materiali sostenibili per il ripristino e la realizzazione di nuovi edifici. Progetto POR-FESR Regione Emilia-Romagna, 2016-2018 (P).
	SANOWORK – Safe Nano Worker Exposure Scenarios. 7 th Framework Programme – Collaborative Project NMP4-SL-2012-28071, 2013-2015 (P).
	InProCer – Laboratorio per l'Innovazione di Prodotto e Processo Ceramico nell'ambito del bando della Regione Emilia-Romagna "Dai distretti produttivi ai distretti tecnologici", 2010-2013 (PM).
Organization of Conferences, Exhibitions and Schools	Organizer of the 16 th Conference of the European Ceramic Society, Torino, Italy, 16-20 June, 2019. Convenor of the Symposium ' <i>Science and Technology of Silicate Ceramics</i> ' within the CIMTEC 2018 – 14 th International Ceramics Congress, Perugia, Italy, 4-8 June 2018. Convenor for the Topic ' <i>Innovative construction materials & cultural heritage</i> ' within ECERS 2015 - 14 th International Conference of the European Ceramic Society, Toledo (Spain) 21-25 June 2015 Organizer of the Symposium on ' <i>Ceramic Raw Materials</i> ', Società Ceramica Italiana, Sassuolo, January 23, 2013; February 13, 2014; January 29, 2015; February 18, 2016; February 9, 2017; February 22, 2018. Organizer of the Symposium on ' <i>Strategic Raw Materials for the Ceramic Industry</i> ', Società Ceramica Italiana, Rimini, September 24, 2012. Organizer of the Symposium on ' <i>Waste Recycling in the Ceramic Production</i> ', Società Ceramica Italiana, Sassuolo, November 29, 2011. Organizer of the Symposium on ' <i>Building-Integrated Photovoltaic Systems</i> ', Società Ceramica Italiana, Baggiovara, March 10, 2011.
Visiting researcher	Anadolu Üniversiteleri , Department of Materials Science and Engineering, Eskişehir, Turkey (host researchers: Servet Turan and Alpagut Kara). Scientific cooperation agreement CNR-TÜBITAK: project <i>Design, synthesis and characterisation of new ceramic pigments obtained by industrial by-products with insight on dissolution mechanisms and kinetics into different traditional ceramic products</i> (2006-2008) and project <i>Water-based ceramic inks</i> (2012-2013). National Research Center , Department of Geology, Cairo, Egypt (host researcher: Ali Ismail). Scientific cooperation agreement CNR-NRC: project <i>Geological-technological study of critical raw materials for the ceramic industry: the case of some Egyptian ring complexes, South Eastern Desert, with special emphasis on alkali syenite</i> (2016-2017). Universidade de Aveiro , Departamento de Engenharia Cerâmica e do Vidro, Aveiro, Portugal (host researcher: João A. Labrincha). Scientific cooperation agreement CNR-GRICES: project <i>Feasibility of industrial wastes recycling in ceramic bodies for the production of bricks and tiles</i> (2003-2004) and CNR-FCT: project <i>Ceramic pigments from industrial wastes</i> (2011-2012). Universidade Federal de Rio de Janeiro e Instituto Alberto Luiz Coimbra de Pós-Graduação e Pesquisa de Engenharia COPPE-UFRJ, Rio de Janeiro, Brazil (host researcher: Ericksson Rocha e Almendra). Scientific cooperation agreement CNR-CNPq: project <i>Study of the sintering process of innovative silicate systems for ceramic tiles</i> (2003-2004). Universidade Federal de Santa Catarina , UFSC, Departamento de Engenharia Química, Florianópolis, Brazil (host researcher: Dachamir Hotza). Programme <i>Ciência sem Fronteiras</i> : project <i>Technological solutions for sustainable production of ceramic tiles</i> (2013-2015). Universidade Federal de São Carlos , UFSCar, Departamento de Engenharia de Materiais, São Carlos, Brazil (host researcher: Anselmo O. Boschi). Programme <i>Ciência sem Fronteiras</i> : project <i>Technological solutions for sustainable production of ceramic tiles</i> (2013-2015). Universidad Nacional del Sur , UNS, Departamento de Geología, Bahía Blanca, Argentina (host researcher: Eduardo Dominguez). Scientific cooperation agreement CNR-CONICET: project <i>Relationships between geological features of kaolin deposits and technological behaviour for ceramic applications</i> (2003-2004); project <i>Development of new raw materials for the ceramic industry: synergy between geology and technology</i> (2007-2008); project <i>Sustainable ceramic production: limits and improvements by dry grinding and influence of the raw materials used</i> (2013-2014).

Editor
Member of
Editorial Boards

Board of
Directors

Ceramics in Modern Technologies (2018-)
Applied Clay Science – Elsevier B.V. (2008-)
Ceramics International – Techna Group - Elsevier B.V. (2010-2017)
Dyes and Pigments – Elsevier B.V. (2008-)
Materiales de Construcción – ICGET-CSIC (2015-2019)
2020-2022 Permanent Executive Council, European Ceramic Society
since 2018 President of the Italian Ceramic Society
2011-2017, Vice-President of the Italian Ceramic Society
since 2002, member of the Board of Directors of the Italian Ceramic Society
1994-2001, member of the Board of Directors of the Italian Group of AIPEA (Association Internationale Pour l'Étude des Argiles) currently AISA.

SCIENTIFIC PRODUCTION

Bibliometric parameters

H-index: **44** (Google Scholar); **36** (Scopus); **36** (Web of Science)

Citations average: **19.0** (Scopus); **19.3** (Web of Science)

Papers on international journals ISI-JCR: **155** (with international peer reviewing)

Papers on scientific journals non ISI-JCR: **59** (26 with international and 33 with national peer reviewing)

Papers on technical journals: **45** (no peer reviewing)

Books and chapters of books: **18** (3 books and 15 chapters)

Proceedings of international congresses: **70** (60 with peer reviewing and 10 without peer reviewing)

Invited lectures: **51** (22 international conferences and 29 national congresses)

Oral presentations: **43** (international conferences)

Poster presentations: **20** (international conferences)

Main publications since
2016

Zanelli C., Dominguez E., Iglesias C., Guarini G., Conte S., Soldati R., Guarini G., Dondi M., *Recycling of residual boron muds into ceramic tiles*. Boletín de la Sociedad Española de Cerámica y Vidrio, 58 (2019) 199-210.

Molinari C., Zanelli C., Dondi M., *Zeolites and modified clays in environmentally sustainable building materials*. In: Mariano Mercurio, Binoy Sarkar and Alessio Langella (Editors), *Modified Clay and Zeolite Nanocomposite Materials: Environmental and Pharmaceutical Applications*, 2019, 1st Edition, Chapter 12, pp 289-307, Elsevier, Amsterdam-Oxford-Cambridge, ISBN 978-0-12-814617-0.

Zanelli C., Soldati R., Conte S., Guarini G., Ismail A.I.M., El-Maghraby M.S., Cazzaniga A., Dondi M., *Technological behaviour of porcelain stoneware bodies with Egyptian syenites*. International Journal of Applied Ceramic Technology, 16 (2019) 574-584. doi:10.1111/ijac.13102

Dondi M., Ardit M., Cruciani G., Sorace L., Di Benedetto F., *New spectroscopic and diffraction data to solve the vanadium-doped zircon pigment conundrum*. Journal of the European Ceramic Society, 38 (2018) 5234-5245. doi:10.1016/j.jeurceramsoc.2018.07.033

Zanoni I., Fiorini V., Rosado M., Ballesteros B., Androulidaki M., Blosi M., Ortelli S., Stagni S., Dondi M., Costa A., *Encapsulation of cationic Iridium(III) tetrazole complexes into silica matrix: synthesis, characterization and optical properties*. New Journal of Chemistry, 42 (2018) 9635-9644. doi:10.1039/C8NJ01514G

Gori C., Mantovani L., Tribaudino M., Zanelli C., Dondi M., *Colour of Ca(Co_xMg_{1-x})Si₂O₆ pyroxenes and their technological behaviour as ceramic colorants*. Ceramics International, 44 (2018) 12745-12753. doi:10.1016/j.ceramint.2018.04.078

Dondi M., *Feldspathic fluxes for ceramics: sources, production trends and technological value*. Resources, Conservation and Recycling, 133 (2018) 191-205. doi: 10.1016/j.resconrec.2018.02.027

Ardit M., Dondi M., Merli M., Cruciani G., *Evidence for a different electronic configuration as a primary effect during compression of orthorhombic perovskites: The case of NdMⁿO₃ (M=Cr,Ga)*. Physical Review B 97 (2018) 064106. doi:10.1103/PhysRevB.97.064106

Zanelli C., Ardit M., Conte S., Soldati R., Cruciani G., Dondi M., *Viscous flow sintering of porcelain stoneware revisited*. Proceedings of the 15th World Congress on Ceramic Tile Quality, QUALICER 2018, Castellón (Spain), 12-13-02-2018, 9 pp., ISSN 2444-9644.

Conte S., Zanelli C., Ardit M., Cruciani G., Dondi M., *Predicting viscosity and surface tension at high temperature of porcelain stoneware bodies: a methodological approach*. Materials, 11 (2018) 2475, 16 p. doi:10.3390/ma11122475

Soldati R., Zanelli C., Guarini G., Piancastelli A., Melandri C., Fazio S., Bignozzi M.C., Dondi M., *Pore evolution and compaction behaviour of spray-dried bodies for porcelain stoneware slabs*. Journal of the European Ceramic Society, 38 (2018) 4127-4136. doi:10.1016/j.jeurceramsoc.2018.04.058

Soldati R., Zanelli C., Guarini G., Fazio S., Bignozzi M.C., Dondi M., *Characteristics and rheological behaviour of spray-dried powders for porcelain stoneware slabs*. Journal of the European Ceramic Society, 38 (2018) 4118-4126. doi:10.1016/j.jeurceramsoc.2018.04.042

Ismail A.I.M., Sadek Ghabrial D., Abdel Wahab W., Eissa M., Cazzaniga A., Zanelli C., Dondi M., *Exploring syenites from ring complexes in the Eastern Desert (Egypt) as ceramic raw materials*. Periodico di Mineralogia 87 (2018) 67-81. doi:10.2451/2018PM749

Da Silva A.L., Dondi M., Raimondo M., Hotza D., *Photocatalytic ceramic tiles: challenges and technological solutions*. Journal of the European Ceramic Society, 38 (2018) 1002-1017. doi:10.1016/j.jeurceramsoc.2017.11.039

Tanişan B., Dondi M., *Cobalt chromite nano pigments synthesis through microwave-assisted polyol route*. Journal of Sol-Gel Science and Technology, 83 (2017) 590-595. doi:10.1007/s10971-017-4449-1

Da Silva A.L., Dondi M., Hotza D., *Self-cleaning ceramic tiles coated with Nb₂O₅-doped-TiO₂ nanoparticles*. Ceramics International, 43 (2017) 11986-11991. doi:10.1016/j.ceramint.2017.06.049

Khabbouchi M., Hosni K., Mezni M., Zanelli C., M. Doggy, Dondi M., Srasra E., *Interaction of metakaolin-phosphoric acid and their structural evolution at high temperature*. Applied Clay Science, 146 (2017) 510-516. doi:10.1016/j.clay.2017.07.006

de Mattos Amadio T., Hotza D., Rodrigues Neto J.B., Blosi M., Costa A.L., Dondi M., *Bentonites functionalized by impregnation with TiO₂, Ag, Pd and Au nanoparticles*. Applied Clay Science, 146 (2017) 1-6. doi:10.1016/j.clay.2017.05.028

Ardit M., Dondi M., Cruciani G., *Locked octahedral tilting in orthorhombic perovskites: At the boundary of the general rule predicting phase transitions*. Physical Review B 95 (2017) 024110. doi:10.1103/PhysRevB.95.024110

Galán-Arboledas R.J., Álvarez De Diego J., Dondi M., Bueno S., *Energetic, environmental and technical assessment for the incorporation of waste steel slag in ceramic building materials*. Journal of Cleaner Production, 142 (2017) 1778-1788. doi:10.1016/j.jclepro.2016.11.110

Dos Santos L.R., Nastri S., Melchtiades F.G., Boschi A.O., Dondi M., Guarini G., Raimondo M., Zanelli C., *Pyroplastic behaviour of porcelain stoneware tiles: wet versus dry manufacturing routes*. Journal of the European Ceramic Society, 37 (2017) 333-342.

doi:j.jeurceramsoc.2016.08.015

Dondi M., Cappelletti P., D'Amore M., de Gennaro R., Graziano S.F., Langella A., Raimondo M., Zanelli C., *Lightweight aggregates from waste materials: Reappraisal of expansion behavior and prediction schemes for bloating*. Construction and Building Materials, 127 (2016) 394-409. doi:10.1016/j.conbuildmat.2016.09.111

Blosi M., Ortelli S., Costa A. L., Dondi M., Loli A., Andreoli S., Benito P., Albonetti S., *Bimetallic Nanoparticles as Efficient Catalysts: Facile and Green Microwave Synthesis*. Materials, 9 (2016) 550, 25 p. doi:10.3390/ma9070550

Napolano L., Menna C., Asprone D., Prota A., Manfredi G., D'Amore M., Graziano S.F., de Gennaro R., Dondi M., *A life cycle-based environmental assessment of lightweight concrete to support recycled materials selection for sustainable design*. Construction and Building Materials, 119 (2016) 370-384. doi: 10.1016/j.conbuildmat.2016.05.042

Melchiades F.G., de Souza D.F., Conserva L.R.S., Natri S., Jaramillo Nieves L.J., Dondi M., Boschi A.O., *Expansión por humedad: el método de evaluación*. Proceedings of the 14th World Congress on Ceramic Tile Quality, QJALICER 2016, Castellón (Spain), 8-9 February 2016, 3 pp., ISBN 978-84-95931-26-9.

Zannini P., Ferrari G., Ganzerli L., Gardini D., Dondi M., *Resolução real na impressão jato de tinta de placas cerâmicas: avaliação preliminar do tamanho de impressão sob diferentes condições de operação*. Cerâmica Industrial, 22 [3] (2017) 7-12. doi:10.4322/icerind.2017.022

Dominguez E., Dondi M., Etcheverry R., Recio C., Iglesias C., *Genesis and mining potential of kaolin deposits in Patagonia (Argentina)*. Applied Clay Science, 131 (2016) 44-47. doi:10.1016/j.clay.2015.12.031

Güngör G.L., Kara A., Gardini D., Blosi M., Dondi M., Zanelli C., *Ink-jet printability of aqueous ceramic inks for digital decoration of ceramic tiles*. Dyes and Pigments, 127 (2016) 148-154. doi:10.1016/j.dyepig.2015.12.018

Ardit M., Borcǎnescu S., Cruciani G., Dondi M., Lazǎu I., Păcurariu C., Zanelli C., *Ni-Ti co-doped hibanite ceramic pigments by combustion synthesis: crystal structure and optical properties*. J. Am. Ceram. Soc. 99 (2016) 1749-1760. doi: 10.1111/jace.14128

Dondi M., Guarini G., Melandri C., Raimondo M., Zanelli C., *Resistance to impact of porcelain stoneware tiles*. Ceramics International, 42 (2016) 5731-5736. doi:10.1016/j.ceramint.2015.12.104

Ardit M., Cruciani G., Dondi M., Zanelli C., *Pigments based on perovskites*. In: Perovskites and related mixed oxides: concepts and applications, V.I. Parvulescu, S. Kaliaguine, P. Granger, and W. Prellier (eds.), chapter 12, 259-288, Wiley-VCH Verlag GmbH & Co. KGaA (2016) ISBN: 978-3-527-33763-7. doi:10.1002/9783527686605.ch12

CONTRACTS AND PROJECTS WITH INDUSTRIES (*SCIENTIFIC MANAGER)

Ceramic tiles	14	Antiche Fornaci D'Agostino*, Caesar*, Casalgrande Padana*, Cerdomus, COEM, Coop. Ceramica d'Imola*, Gardenia-Orchidea*, Gigacer*, Granito Forte, Gruppo Romani, Keser Diva Desing*, LB*, Marazzi*, Nuova Riwal, Panaria*, Pastorelli*, Ricchetti*, SACMI*, SITI-B&T*, System*.
Raw materials and waste recycling	11	Accornero & C. Nord, Adriacoke, Bitor*, Huntsman-Tioxide Europe*, Minerali Industriali-Maffei*, Nuova Cosmave*, Piedra Grande*, Ravenna Mill, RIMIN*, SICER, Solvay Italia*, UNIDO.
Refractories & technical ceramics	10	Alluminagres*, Colorobbia Italia*, Elettroplast, ICRA, Pagnossin*, Quartz Techno*, Refrattari Speciali*, Simex.
Pigments and decoration	10	Colorobbia Italia*, Idea Decalcomania*, INCO, METCO*, Projecta Engineering*, SICER*, System*, Vetriceramici*.
Clay bricks and building systems	8	Aliva*, Brunelleschi*, CertiMac*, Consorzio Alveolater*, Il Ferrone, Innovarcilla*, Laterforni*, Ri.Cert*.
Functionalization and additives	3	Daunia Wind*, Fila, System.

TEACHING

PhD thesis	25	in Chemical Engineering, Chemical Sciences, Earth Sciences, Environmental Engineering, Geology, Industrial Chemistry, Materials Engineering.
MSc thesis	36	in Chemistry, Civil Engineering, Environmental Engineering, Geological Sciences, Industrial Chemistry, Materials Engineering, and Natural Sciences.
Post-doc stages	4	

SCIENTIFIC PARTNERSHIPS & COLLABORATIONS

International Universities: **Anadolu-Eskişehir** (Turkey), **Aveiro** (Portugal), **UNS-Bahía Blanca** (Argentina), Jaime I-Castellón (Spain), Castilla-La Mancha Ciudad Real (Spain), UNESCO-Criciúma (Brazil), **UFSC-Florianópolis** (Brazil), ULP-La Plata (Argentina), Indiana-Bloomington (USA), Jaén-Linares (Spain), **Complutense-Madrid** (Spain), Osmangazi-Eskişehir (Turkey), **UFRJ-Rio de Janeiro** (Brazil), Cantabria-Santander (Spain), **UFSCar-São Carlos** (Brazil), Politehnica-Timisoara (Romania), Viana do Castelo (Portugal).

Research Centres: CETEM-Rio de Janeiro (Brazil), CNRS-Grenoble (France), CNRST-Borj Cédra (Tunisia), **CRC-Centro Revestimentos Cerâmicos** (Brazil), CSIC-Materials Science Institute (Spain), ESRF-Grenoble (France), **Innovarcilla** (Spain), **Instituto de Tecnología Cerámica** (Spain), Max-Planck Institute-Stuttgart (Germany), NRC-Cairo (Egypt).

National Universities: Ancona, Bari, **Bologna**, Cagliari, **Ferrara**, Firenze, L'Aquila, Milano, **Modena e Reggio Emilia**, **Napoli-Federico II**, Padova, Palermo, **Parma**, Perugia, Roma-La Sapienza, Roma-Tre, **Salerno**, **Sannio**, Sassari, Torino, Urbino.

Research Centres: **Centro Ceramico**, **CertiMaC**, CNR-IGAG, ECAM-RICERT, ENEA Faenza.

"Il presente Curriculum è reso sotto forma di dichiarazione sostitutiva di certificazione e di dichiarazione sostitutiva dell'atto di notorietà ai sensi degli artt. 46 e 47 del d.P.R. 445/2000. All'uopo il sottoscritto dichiara di essere consapevole della responsabilità penale prevista, dall'art. 76 del citato decreto per le ipotesi di falsità in atti e dichiarazioni mendaci ivi indicate. Il sottoscritto autorizza il trattamento dei dati personali in esso contenuti e per le finalità connesse all'uso dello stesso ai sensi del d.lgs. n. 196/03 e successive modifiche e integrazioni."

Faenza, January 31, 2020

Michele Dondi