Colomba Di Blasi is member of the permanent academic staff at the University of Napoli "Federico II" (1983- research assistant, 1992- associate professor, 2002-todate full professor). Her academic career is in Chemical Engineering and her teaching courses are in the area of "Theory of Chemical Process Development".
She has a well established international reputation in the fields of fire safety science and biomass/waste thermochemical conversion as testified by 120 publications in international journals. According to Scopus, for a number of 131 listed documents, the citation number is 6900 with an h-index of 45 (date February 3rd 2018).

The research activities she is currently involved concern the following topics:
- Biomass torrefaction;
- Reaction mechanisms and products of biomass pyrolysis (packed- and fluidized-bed reactors);
- Catalytic pyrolysis of biomass for chemicals and biofuels production;
- Heats of the biomass pyrolysis reactions;
- Lignocellulosic char reactivity and kinetics;
- Fixed-bed gasification of biomass;
- Development of transport models for particle pyrolysis (conventional and microwave induced heating) and pyrolyzers, particle combustion and gasification (coupled solid-phase and CFD gas-phase), updraft and downdraft fixed-bed gasifiers, fluidized-bed gasifiers and combustors (two-phase theory of fluidization coupled with the transport phenomena of the fluidized-bed reactor);
- Laboratory-scale analysis of the thermal response to fire of composite materials;
- Development of transport models for the combustion of composite materials;
- Mechanisms of flame retardants, including nanocomposites.

She has been the coordinator or the scientific manager of numerous national and international R&D projects which, among others, include:
- MIUR 2012-2015 (PON02_00029_3206086) - COCET " The thermal behavior of composite materials under extreme conditions: high temperature";
- EU 2011-2014- 284498 The European Research Infrastructure for Thermochemical Biomass conversion- BRISK;
- MIUR 2007-2011: (DM 20162, Art 12 DM 593/00)- PIROS "Integrated design of multi-functional components for industrial applications associated with the development of facilities for tests and qualification of materials under fire conditions";
- EU 2005-2008: ThermalNet, cluster PyNe (pyrolysis) + GasNet (gasification) + CombNet (combustion) (Intelligent Energy Europe program). An integrated network on thermal biomass conversion for power, heat and transportation fuels (EIE/04/159/S07.38647) ;
- (EU) 2002-2006: HPRN-CT-2002-00197 (FIRENET) Underventilated Compartment Fires;
- (EU) 2003-2005: ENK5-CT2002-00675 (DETAR) Supercritical gasification/oxidation of Tar-Water;
- EU 2001-2004: ThermoNet, cluster PyNe (pyrolysis) + GasNet (gasification) (ENERGIE program);
- (ASI, ESA) 2001-2003 I/R/080,102,232 Ignition and smoldering combustion of insulating materials;
-(EU) 1998-2000: ALE - Pyrolysis and gasification of biomass in Latin America and Europe (Alfa Program) - Research and Training Network;
- EU 1998-2001: PyNe - Pyrolysis Network (FAIR program and IEA Bioenergy);
- (EU) 1997-1999: JOR3-CT97-0138 Combined low-temperature gasification and combustion for clean power production from straw and biomass with high ash content;
- (EU) 1995-1998: JOR3-CT95-0081 Catalytic pyrolysis of biomass for improved liquid fuel quality;

- (EU) 1995-1998: JOR3-CT95-0021 Fixed-bed gasification of agricultural residues;
- (EU) 1994-1998: ERBCHRX-CT94-0623 Gravity dependent phenomena in combustion;
- (EU) 1994-1995: MAT1.CT94-0036 Reaction to fire of construction products;
- (EU) 1994-1997: AIR93-0889 Integrated chemicals and fuels recovery from pyrolysis liquids generated by fast pyrolysis;
- (EU) 1993: JOUB-0035: Techno-economic assessment of thermochemical liquid fuels production systems and modeling pyrolysis processes.

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3) A. Galgano, C. Branca, C. Di Blasi, P. Vollaro, E. Milella, Modeling the ignition of poly(methyl methacrylate)/carbon nanotube nanocomposites, Polymer Degradation and Stability 144: 344-353, 2017.
4) C. Di Blasi, C. Branca, A. Galgano, Influences of potassium hydroxide on the rate and thermicity of wood pyrolysis reactions, Enery &Fuels 31:6154-6162, 2017.
5) C. Branca, C. Di Blasi, A. Galgano, Experimental analysis about the exploitation of industrial hemp (Cannabis Sativa) in pyrolysis, Fuel Processing Technology 162:20-29 2017
6) C. Di Blasi, C. Branca, A. Galgano, On the experimental evidence of exothermicity in wood and biomass pyrolysis, Energy Technology, 5, 19-29, 2017.
7) C. Di Blasi, A. Galgano, C. Branca, M. Clemente, Analysis of the interactions between moisture evaporation and exothermic pyrolysis of hazelnut shells, Energy & Fuels 30: 7878-7886, 2016.
8) C. Branca, C. Di Blasi, A summative model for the pyrolysis reaction heats of beech wood, Thermochimica Acta 638:10-16, 2016.
9) C. Branca, C. Di Blasi, A. Galgano, Chemical characterization of volatile products of biomass pyrolysis under significant reaction-induced overheating, Journal of Analytical and Applied Pyrolysis 119:8-17, 2016.
10) C. Di Blasi, C. Branca, A. Galgano, F. Zenone, Modifications in the thermicity of the pyrolysis reactions of ZnCl2-loaded wood, Industrial & Engineering Chemistry Research 54: 12741-12749, 2015.
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22) C . Di Blasi, C. Branca, V. Lombardi, P. Ciappa, C. Di Giacomo, Effects of particle size and density on the packed-bed pyrolysis of wood, Energy & Fuels 27: 6781−6791, 2013.
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