

## PUBLICATIONS

PROF. DAVID CAPPELLETTI

### CITATION REPORT

David Cappelletti is co-author of 190 scientific publications (170 ISI & SCOPUS indexed papers and 20 chapters of books). Total citations >4500, *h*-index: 42.

#### FULL PAPERS (indexed ISI or SCOPUS)

- (170) **Andrea Franzetti, Isabella Gandolfi, Giuseppina Bestetti, Emilio Padoa Schioppa, Claudia Canedoli, Diego Brambilla, David Cappelletti, Bartolomeo Sebastiani, Ermanno Federici, Maddalena Papacchini, Roberto Ambrosini** Plant-microorganisms interaction promotes removal of air pollutants in Milan (Italy) urban area, *Journal of Hazardous Materials* 2019, 121021, ISSN 0304-3894, <https://doi.org/10.1016/j.jhazmat.2019.121021>.
- (169) **L. Ferrero, C. Ritter, D. Cappelletti, B. Moroni, G. Močnik, M. Mazzola, A. Lupi, S. Becagli, R. Traversi, M. Cataldi, R. Neuber, V. Vitale, E. Bolzacchini** Aerosol optical properties in the Arctic: The role of aerosol chemistry and dust composition in a closure experiment between Lidar and tethered balloon vertical profiles *Science of The Total Environment* **686** 452-467 (2019). <https://doi.org/10.1016/j.scitotenv.2019.05.399>.
- (168) **B. Moroni, S. Crocchianti, C. Petroselli, R. Selvaggi, S. Becagli, R. Traversi & D. Cappelletti** Potential source contribution function analysis of long-range transported aerosols in the Central Mediterranean: a comparative study of two background sites in Italy *Rend. Fis. Acc. Lincei* **30**, 337–349 (2019). DOI 10.1007/s12210-019-00792-x
- (167) **Francesca Nunzi, Diego Cesario, Leonardo Belpassi, Francesco Taranelli, Luiz F. Roncaratti, Stefano Falcinelli, David Cappelletti and Fernando Pirani** Insight into the halogen-bond nature of noble gas-chlorine systems by molecular beam scattering experiments, ab initio calculations and charge displacement analysis *Phys. Chem. Chem. Phys.*, **21**, 7330-7340 (2019)
- (166) **Cappelletti D, Cinti A, Nicoziani A, Falcinelli S and Pirani F** Molecular Beam Scattering Experiments as a Sensitive Probe of the Interaction in Bromine–Noble Gas Complexes. *Front. Chem.* **7** 320 (2019). doi: 10.3389/fchem.2019.00320
- (165) **Ascenzi D, Scotoni M, Tosi P, Cappelletti D and Pirani F** Stereodynamical Effects by Anisotropic Intermolecular Forces. *Front. Chem.* **7** 390 (2019). doi: 10.3389/fchem.2019.00390
- (164) **Petroselli, C.; Moroni, B.; Crocchianti, S.; Selvaggi, R.; Vivani, R.; Soggia, F.; Grotti, M.; D’Acapito, F.; Cappelletti, D.** Iron Speciation

- of Natural and Anthropogenic Dust by Spectroscopic and Chemical Methods. *Atmosphere* **10** 8 (2019)
- (163) **F. Pirani, D. Cappelletti, S. Falcinelli, D. Cesario, F. Nunzi, L. Belpassi, F. Tarantelli** Selective Emergence of the Halogen Bond in Ground and Excited States of Noble-Gas-Chlorine Systems *Angew. Chem. Int. Ed.* **58** 4195 (2019)
- (162) **C. Ritter, M. Angeles Burgos, C. Böckmann, J. Lisok, K.M. Markowicz, B. Moroni, D. Cappelletti, R. Udisti, M. Maturilli, R. Neuber** Microphysical Properties and Radiative Impact of an intense Biomass Burning aerosol event measured over Ny-Ålesund, Spitsbergen in July 2015, *Tellus B: Chemical and Physical Meteorology* **70** 1-24 (2018). WOS:000451039805106
- (161) **C. Böckmann, C. Ritter and D. Cappelletti** Mathematical Tool for a Closure Study of Aerosol Microphysical Property Retrieval Using Lidar and Photometer Data *IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium*, Valencia, 2018, pp. 5575-5578 (2018). ISBN: 978-1-5386-7150-4; ISSN: 2153-7003 DOI: 10.1109/IGARSS.2018.8518674
- (160) **E. Federici, C. Petroselli, E. Montalbani, C. Casagrande, E. Ceci, B. Moroni, G. La Porta, S. Castellini, R. Selvaggi, B. Sebastiani, S. Crocchianti, I. Gandolfi, A. Franzetti, D. Cappelletti** Airborne bacteria and persistent organic pollutants associated with an intense Saharan dust event in the Central Mediterranean, *Science of the Total Environment* **645** 401-410 (2018).
- (159) **Moroni B, Arnalds O, Dagsson-Waldhauserová P, Crocchianti S, Vivani R and Cappelletti D** Mineralogical and Chemical Records of Icelandic Dust Sources Upon Ny-Ålesund (Svalbard Islands), *Frontiers in Earth Science* **6** 187 (2018).
- (158) **E. Goretti, M. Pallottini, B.T. Cenci Goga, R. Selvaggi, C. Petroselli, F. Vercillo, D. Cappelletti** Mustelids as bioindicators of the environmental contamination by heavy metals, *Ecological Indicators* **94** 320-327 (2018).
- (157) **M. De Santis, F. Nunzi, D. Cesario, L. Belpassi, F. Tarantelli, D. Cappelletti, F. Pirani** Cooperative role of Halogen and Hydrogen Bonding In The Stabilization Of Water Adducts With Apolar Molecules, *New Journal of Chemistry*, **42** 10603 (2018).
- (156) **A. Coppi, L. Lastrucci, D. Cappelletti, M. Cerri, F. Ferranti, V. Ferri, B. Foggi, D. Gigante, R. Venanzoni, D. Viciani, R. Selvaggi, L. Reale** AFLP Approach Reveals Variability in *Phragmites australis*: Implications for its Die-back and Evidence for Genotoxic Effects, *Frontiers in Plant Science*, **9** 386 (2018).
- (155) **C. Petroselli, S. Crocchianti, B. Moroni, S. Castellini, R. Selvaggi, S. Nava, G. Calzolari, F. Lucarelli, D. Cappelletti** Disentangling the major source areas for an intense aerosol advection in the Central Mediterranean on the basis of Potential Source Contribution Function modeling of chemical and size distribution measurements, *Atmospheric Research* **204** 67-77 (2018).
- (154) **A. Spolaor, E. Barbaro, M. Mazzola, A.P. Viola, J. Lisok, F. Obleitner, K.M. Markowicz, D. Cappelletti** Determination of black carbon and

- nanoparticles along glaciers in the Spitsbergen (Svalbard) region exploiting a mobile platform, *Atmospheric Environment*, **170** 184–196 (2017).
- (153) **Barbaro, E, Spolaor, A, Karroca, O, Park, KT, Martma, T, Isaksson, E, Kohler, J, Gallet, JC, Bjorkman, MP, Cappelletti, D, Spreen, G, Zangrando, R, Barbante, C, Gambaro, A** Free amino acids in the Arctic snow and ice core samples: Potential markers for paleoclimatic studies, *Science of the Total Environment*, **607**, 454-462 (2017).
- (152) **Pallottini, M; Goretti, E; Selvaggi, R; Cappelletti, D; Dedieu, N; Cereghino, R** An efficient semi-quantitative macroinvertebrate multimetric index for the assessment of water and sediment contamination in streams, *Inland Waters*, **7** 314-322 (2017)
- (151) **Markowicz, K. M.; Ritter, C.; Lisok, J.; Makuch, P.; Stachlewska, I. S.; Cappelletti, D.; Mazzola, M.; Chilinski, M. T..** Vertical variability of aerosol single-scattering albedo and equivalent black carbon concentration based on in-situ and remote sensing techniques during the iAREA campaigns in Ny-Ålesund, *Atmospheric Environment*, **164**, 431–447 (2017)
- (150) **M. Grotti, F. Soggia, F. Ardini, A. Bazzano, B. Moroni, R. Vivani, D. Cappelletti, C. Misic** Trace elements in surface sediments from Kongsfjorden, Svalbard: occurrence, sources and bioavailability, *International Journal of Environmental Analytical Chemistry* **97**, 401–418 (2017).
- (149) **B. Moroni, D. Cappelletti, S. Crocchianti, S. Becagli, L. Caiazzo, R. Traversi, R. Udisti, M. Mazzola, K. Markowicz, C. Ritter, T. Zielinski** Morphochemical characteristics and mixing state of long range transported wildfire particles at Ny-Ålesund (Svalbard Islands), *Atmospheric Environment*, **156**, 135–145 (2017)
- (148) **M. Pallottini, D. Cappelletti, A. Fabrizi, E. Gaino, E. Goretti, R. Selvaggi, R. Chereghino** Macroinvertebrate functional trait responses to chemical pollution in agricultural-industrial landscapes *River Research and Applications* **33**, 505–513 (2017)
- (147) **K. M. Markowicz, P. Pakszys, C. Ritter, T. Zielinski, R. Udisti, D. Cappelletti, M. Mazzola, M. Shiobara, P. Xian, O. Zawadzka, J. Lisok, T. Petelski, P. Makuch, and G. Karasinski** Impact of North American intense fires on aerosol optical properties measured over the European Arctic in July 2015 *Journal of Geophysical Research: Atmospheres* **121** 14487–14512 (2016)
- (146) **Ferrero, L., Cappelletti, D., Busetto, M., Mazzola, M., Lupi, A., Lancconelli, C., Becagli, S., Traversi, R., Caiazzo, L., Giardi, F., Moroni, B., Crocchianti, S., Fierz, M., Mocnik, G., Sangiorgi, G., Perrone, M. G., Maturilli, M., Vitale, V., Udisti, R., and Bolzacchini, E.** Vertical profiles of aerosol and black carbon in the Arctic: a seasonal phenomenology along 2 years (2011-2012) of field campaigns, *Atmospheric Chemistry and Physics*, **16**, 12601–12629 (2016)
- (145) **A. Bazzano, D. Cappelletti, R. Udisti, M. Grotti** Long-range transport of atmospheric lead reaching Ny-Ålesund: Interannual and seasonal variations of potential source areas, *Atmospheric Environment*, **139**, 11–19 (2016).

- (144) **D. Cappelletti, R. Azzolini, L. Langone, S. Ventura, A. Viola, S. Aliani, V. Vitale, E. Brugnoli** Environmental changes in the Arctic: an Italian perspective *Rendiconti Lincei* **27** 1-6 (2016)
- (143) **E. Goretti, M. Pallottini, M. I. Ricciarini, R. Selvaggi, D. Cappelletti** Heavy metals bioaccumulation in selected tissues of red swamp crayfish: an easy tool for monitoring environmental contamination levels *Science of the Total Environment* **559** 339-346 (2016)
- (142) **B. Moroni, D. Cappelletti, L. Ferrero, S. Crocchianti, M. Busetto, M. Mazzola, S. Becagli, R. Traversi, R. Udisti** Local vs long range sources of aerosol particles upon Ny-Ålesund (Svalbard Islands): mineral chemistry and geochemical records *Rendiconti Lincei* **27** 115-127 (2016)
- (141) **D. Cappelletti, S. Falcinelli, F. Pirani** The intermolecular interaction in  $D_2-CX_4$  and  $O_2-CX_4$  ( $X = F, Cl$ ) systems: Molecular beam scattering experiments as a sensitive probe of the selectivity of charge transfer component *Journal of Chemical Physics*, **145** 134305 (2016).
- (140) **F. Giardi, S. Becagli, R. Traversi, D. Frosini, M. Severi, L. Caiazzo, C. Ancillotti, D. Cappelletti, B. Moroni, M. Grotti, A. Bazzano, A. Lupi, M. Mazzola, V. Vitale, O. Abollino, L. Ferrero, E. Bolzacchini, A. Viola, R. Udisti** Size distribution and ion composition of aerosol collected at Ny-Ålesund in the spring – summer field campaign 2013 *Rendiconti Lincei* **27** 47-58 (2016)
- (139) **S. Del Sarto, M.G. Ranalli, D. Cappelletti, B. Moroni, S. Crocchianti and S. Castellini** Modelling spatio-temporal air pollution data from a mobile monitoring station *Journal of Statistical Computation and Simulation*, **86**, 2456–2559 (2016)
- (138) **R. Udisti, A. Bazzano, S. Becagli, E. Bolzacchini, L. Caiazzo, D. Cappelletti, L. Ferrero, D. Frosini, F. Giardi, M. Grotti, A. Lupi, M. Malandrino, M. Mazzola, B. Moroni, M. Severi, R. Traversi, A. Viola, V. Vitale** Sulfate source apportionment in the Ny-Ålesund (Svalbard Islands) Arctic aerosol *Rendiconti Lincei* **27** 85-94 (2016).
- (137) **M. Giovanna Ranalli, G. Rocco, G. Jona Lasinio, B. Moroni, S. Castellini, S. Crocchianti and D. Cappelletti** Functional exploratory data analysis for high-resolution measurements of urban particulate matter, *Biometrical Journal* **58** 1229–1247 (2016)
- (136) **M. Mazzola, M. Busetto, L. Ferrero, A.P. Viola, D. Cappelletti** AGAP: an atmospheric gondola for aerosol profiling, *Rendiconti Lincei* **27** 105–113 (2016).
- (135) **A. Bazzano, F. Ardini, M. Grotti, M. Malandrino, A. Giacomino, O. Abollino, D. Cappelletti, S. Becagli, R. Traversi and R. Udisti** Elemental and lead isotopic composition of atmospheric particulate measured in the Arctic region (Ny-Ålesund, Svalbard Islands), *Rendiconti Lincei* **27** 73–84 (2016).
- (134) **David Cappelletti, Vincenzo Aquilanti, Alessio Bartocci, Francesca Nunzi, Francesco Tarantelli, Leonardo Belpassi, Fernando Pirani** The

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- (133) **Andrea Spolaor, Elena Barbaro, Jean Marc Christille, Torben Kirchgeorg, Fabio Giardi, David Cappelletti, Clara Turetta, Andrea Bernagozzi, Mats P Bjorkman, Enzo Bertolini, Carlo Barbante** Evolution of the Svalbard annual snow layer during the melting phase, *Rendiconti Lincei* **27** 147–154 (2016).
- (132) **D. Cappelletti, A. Bartocci, F. Frati, L.F. Roncaratti, L. Belpassi, F. Tarantelli, P. Aiswaryalakshmi, E. Arunan, and F. Pirani** H<sub>2</sub>O–CH<sub>4</sub> and H<sub>2</sub>S–CH<sub>4</sub> complexes: a direct comparison through molecular beam experiments and ab-initio calculations, *Physical Chemistry Chemical Physics*, **17** 30613–30623 (2015).
- (131) **A. Bartocci, F. Frati, L. F. Roncaratti, D. Cappelletti, F. Tarantelli, L. Belpassi and F. Pirani** An ab initio electronic density study of the CH<sub>4</sub>–Ar, CH<sub>4</sub>–Xe, CH<sub>4</sub>–H<sub>2</sub>O and CH<sub>4</sub>–H<sub>2</sub>S complexes: insights into the nature of the intermolecular interaction, *Molecular Physics*, **113** 3992–3999 (2015).
- (130) **B. Moroni, S. Becagli, E. Bolzacchini, M. Busetto, D. Cappelletti, S. Crocchianti, L. Ferrero, D. Frosini, C. Lanconelli, A. Lupi, M. Maturilli, M. Mazzola, M. G. Perrone, G. Sangiorgi, R. Traversi, R. Udisti, A. Viola, and V. Vitale** Vertical Profiles and Chemical Properties of Aerosol Particles upon Ny-Ålesund (Svalbard Islands), *Advances in Meteorology*, **2015**, Article ID 292081, 11 pages (2015)
- (129) **Cartechini, L. and Castellini, S. and Moroni, B. and Palmieri, M. and Scardazza, F. and Sebastiani, B. and Selvaggi, R. and Vagnini, M. and Delogu, G. L. and Brunetti, B. G. and Cappelletti, D.** Acute episodes of black carbon and aerosol contamination in a museum environment: Results of integrated real-time and off-line measurements *Atmospheric Environment*, **116**, 130–137 (2015).
- (128) **A. Bazzano, F. Ardini, S. Becagli, R. Traversi, R. Udisti, D. Cappelletti, M. Grotti** Source assessment of atmospheric lead measured at Ny-Ålesund, Svalbard, *Atmospheric Environment*, **113**, 20–26 (2015).
- (127) **A. Bartocci, L. Belpassi, D. Cappelletti, S. Falcinelli, F. Grandinetti, F. Tarantelli, F. Pirani** Catching the Role of Anisotropic Electronic Distribution and Charge Transfer in Halogen Bonded Complexes of Noble Gases, *Journal of Chemical Physics*, **142** 184304 (2015).
- (126) **M. Pallottini, E. Goretti, E. Gaino, R. Selvaggi, D. Cappelletti, R. Cereghino** Invertebrate diversity in relation to chemical pollution in an Umbrian stream system (Italy), *Comptes rendus Biologies*, **338** 511–520 (2015).
- (125) **D. Cappelletti, A. Bartocci, F. Grandinetti, S. Falcinelli, F. Tarantelli, L. Belpassi, F. Pirani** Experimental Evidence of Chemical Components in the Bonding of Helium and Neon with Neutral Molecules, *Chemistry European Journal*, **21** 6234–6240 (2015).

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- (123) **S. Sandrini, S. Fuzzi, A. Piazzalunga, P. Prati, P. Bonasoni, F. Cavalli, M. C. Bove, M. Calvello, D. Cappelletti, C. Colombi, D. Contini, G. de Gennaro, A. Di Gilio, P. Fermo, L. Ferrero, V. Gianelle, Michele Giugliano, P. Ielpo, G. Lonati, A. Marinoni, D. Massabó, U. Molteni, B. Moroni, G. Pavese, C. Perrino, M. G. Perrone, M. R. Perrone, J.-Ph. Putaud, T. Sargolini, R. Vecchi, S. Gilardoni** Spatial and seasonal variability of carbonaceous aerosol across Italy, *Atmospheric Environment*, **99**, 587-598 (2014).
- (122) **D. Cappelletti, S. Crocchianti, P. D’Aquila, C. Iurisci, M. Pecci, M. Pecci** The Ephemeral Epiglacial Lake of the Ghiacciaio del Calderone, *Geografia Fisica e Dinamica Quaternaria*, **37** 10-14 (2014).
- (121) **L. Ferrero, M. Castelli, B. S. Ferrini, M. Moscatelli, M. G. Perrone, G. Sangiorgi, G. Rovelli, L. D’Angelo, B. Moroni, F. Scardazza, G. Mocnik, E. Bolzacchini, M. Petitta, and D. Cappelletti** Impact of black carbon aerosol over Italian basin valleys: high resolution measurements along vertical profiles, radiative forcing and heating rate, *Atmospheric Chemistry and Physics*, **14**, 9641-9664 (2014).
- (120) **L. Roncaratti, P. Candori, D. Cappelletti, and F. Pirani** Polar molecules engaged in pendular states captured by molecular beam scattering experiments, *Physical Review A*, **90** 012705 (2014). ISSN: 10895639
- (119) **A. Bartocci, D. Cappelletti, F. Pirani, F. Tarantelli, L. Belpassi** Intermolecular Interaction in the H<sub>2</sub>S-H<sub>2</sub> Complex. Molecular Beam Scattering Experiments and AB-Initio Calculations, *Journal of Physical Chemistry A*, **118** 6440-6450 (2014).
- (118) **A. Di Veroli, F. Santoro, M. Pallottini, R. Selvaggi, F. Scardazza, D. Cappelletti, E. Goretti** Deformities of chironomid larvae and heavy metal pollution: from laboratory to field studies, *Chemosphere*, **112**, 9–17 (2014).
- (117) **L. Roncaratti, D. Cappelletti, F. Pirani** The spontaneous synchronized dance of pairs of water molecules, *Journal of Chemical Physics*, **140** 124318 (2014).
- (116) **B. Moroni, C. Viti, D. Cappelletti** Exposure vs toxicity levels of airborne quartz, metal and carbon particles in cast iron foundries *Journal of Exposure Science and Environmental Epidemiology* **24**, 42–50 (2014).
- (115) **S. Castellini, B. Moroni, D. Cappelletti** PMetro: Measurement of urban aerosols on a mobile platform *Measurement* **49**. 99–106 (2014).
- (114) **A. Wahner, S. Pandis, J. Allan, G. Mc Figgans, J. Abbatt, M. Freedman, M. Johnston, R. Harrison, N. Donahue, C. Percival, D. Heard, K. Carslaw, M. Jacobson, T. Olenius, H. Vehkamäki, S. Nizkorodov, A. Kiendler-Scharr, D. Cappelletti, H. Herrmann, T. Cox, V. F. McNeill, A. Lewis, I.K. Colomer Ortega, U. Krieger, A. Colussi, B. Aumont, J. Kroll, R. Volkamer, B. Nozière, J. Abbat, Y. Rudich, D.**

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- (113) **D. Cappelletti, E. Ronca, L. Belpassi, F. Tarantelli and F. Pirani** Intermolecular Interaction in the  $\text{NH}_3\text{-H}_2$  and  $\text{H}_2\text{O-H}_2$  Complexes by Molecular Beam Scattering Experiments: The Role of Charge Transfer *Journal of Physical Chemistry A*, **117** 12601–12607 (2013).
- (112) **S. Castellini, B. Moroni, M. G. Ranalli, G. Lama, M. Eheim, R. Ferrera, A. Trapani, and D. Cappelletti**, real time monitoring of urban particulate matter on a mobile platform, IMEKO Conference Proceeding, **TC19**, 5–8 (2013), IISBN: 978-162993106-7.
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- (110) **D. Cappelletti, E. Ronca, L. Belpassi, F. Tarantelli and F. Pirani** Revealing charge-transfer effects in gas-phase water chemistry, *Accounts of Chemical Research*, **45** 1571–1580 (2012)
- (109) **D. Cappelletti, P. Candori, S. Falcinelli, M. Alberti, F. Pirani** A molecular beam scattering investigation of methanol – noble gas complexes: Characterization of the isotropic potential and insights into the nature of the interaction, *Chemical Physics Letters* **545** 14–20 (2012);
- (108) **B. Brunetti, P. Candori, D. Cappelletti, S. Falcinelli, F. Pirani, D. Stranges, F. Vecchiocattivi** Penning ionization electron spectroscopy of water molecules by metastable neon atoms *Chemical Physics Letters* **539-540** 19–23 (2012).
- (107) **F. Pirani, P. Candori, M.S. Pedrosa Mundim, L. Belpassi, F. Tarantelli, D. Cappelletti** On the role of charge transfer in the stabilization of weakly bound complexes involving water and hydrogen sulphide molecules *Chemical Physics* **398** 176–185 (2012).
- (106) **L. Ferrero, D. Cappelletti, B. Moroni, G. Sangiorgi, M.G. Perrone, S. Crocchianti, E. Bolzacchini** Wintertime aerosol dynamics and chemical composition across the mixing layer over basin valleys *Atmospheric Environment* **56** 143–153 (2012);
- (105) **B. Moroni, D. Cappelletti, F. Marmottini, F. Scardazza, L. Ferrero, E. Bolzacchini** Integrated single particle-bulk chemical approach for the characterization of local and long range sources of particulate pollutants, *Atmospheric Environment* **50** 267–277 (2012).
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