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## PUBLICATIONS

### *Publications in peer-reviewed journals*

1. **Coustenis, A., Bézard, B., Gautier, D.**, 1989a. Titan's Atmosphere from Voyager Infrared Observations: I. The gas composition of Titan's equatorial region. *Icarus* **80**, 54-76.
2. **Coustenis, A., Bézard, B., Gautier, D.**, 1989b. Titan's Atmosphere from Voyager Infrared Observations: II. The CH<sub>3</sub>D abundance and D/H ratio from the 900-1200 cm<sup>-1</sup> spectral region. *Icarus* **82**, 67-80.
3. **Lellouch, E., Coustenis, A., Gautier, D., Raulin, F., Dubouloz, N., Frère, C.**, 1989. Titan's atmosphere and hypothesized ocean: a reanalysis of the Voyager 1 radio-occultation and IRIS 7.7 μm data. *Icarus* **79**, 328-349.
4. **Lellouch, E., Hunten, D. Kockarts, G., Coustenis, A.**, 1990. Titan's thermosphere profile. *Icarus* **83**, 308-324.
5. **Pearl, J. C., Conrath, B. J., Hanel, R. A., Pirraglia, J. A., Coustenis, A.**, 1990. The Albedo, Effective Temperature, and Energy Balance of Uranus, as determined from Voyager IRIS data. *Icarus* **84**, 12-28.
6. **Raulin, F., Accaoui, B. Razaghi, A., Dang-Nhu, M., Coustenis, A., Gautier, D.**, 1990. Infrared spectra of gaseous organics: application to the atmosphere of Titan. II C<sub>4</sub> alkanenitriles and benzene. *Spectrochimica Acta* **46**, 671-683.
7. **Coustenis, A.**, 1990. Spatial variations of temperature and composition in Titan's atmosphere: Recent results. *Ann. Geophys.* **8**, 645-652.
8. **Petropoulos, B., Georgakilas, A., Gautier, D., Coustenis, A., Bézard, B.**, 1990. Physical parameters for the atmosphere of Uranus. *Adv. Space Res.* **10**, 109-112.
9. **Coustenis, A.**, 1991. Titan: Recent Developments. *Vistas in Astronomy* **34**, 11-50.
10. **Coustenis, A., Bézard, B., Gautier, D., Marten, A. Samuelson, R.**, 1991. Titan's Atmosphere from Voyager Infrared Observations: III. The vertical distributions of hydrocarbons and nitriles near Titan's North Pole. *Icarus* **89**, 152-167.
11. **Letourneur, B., Coustenis, A.**, 1993. Titan's atmospheric structure from Voyager 2 infrared spectra. *Plan. Space Sci.* **41**, 593-602.
12. **Coustenis, A., Encrenaz, Th., Bézard, B., Bjoraker, Graner, G., Dang-Nhu, M., Arié, E.**, 1993. Modeling Titan's thermal infrared spectrum for high-resolution space observations. *Icarus* **102**, 240-260.
13. **Bézard, B., Coustenis, A., McKay, C. P.**, 1995. Titan's stratospheric temperature asymmetry: a radiative origin?. *Icarus* **113**, 267-276.
14. **Coustenis, A., Bézard, B.** 1995. Titan's Atmosphere from Voyager Infrared Observations: IV. Latitudinal Variations in Temperature and Composition. *Icarus* **115**, 126-140.
15. **Encrenaz, Th., Bézard, B., Crovisier, J., Coustenis, A., Lellouch, E., Gulkis, S., Atreya, S.**, 1995. Detectability of molecular species in planetary atmospheres from their rotational transitions. *Plan. Space Sci.* **43**, No 12, 1485-1516.
16. **Coustenis, A., Lellouch, E., Maillard, J. P., McKay, C. P.**, 1995. Titan's surface: composition and variability from the near-infrared albedo. *Icarus* **118**, 87-104.
17. **Coustenis, A.**, 1995. Titan's atmosphere and surface: parallels and differences with the primitive Earth. Dans « Comparative planetology with an Earth prospective », *Earth, Moon, and Planets* **67** Nos 1-3, M.T. Chahine, M.F. A'Hearn and J. Rahe Eds, 95-100.
18. **Combes, M., Vapillon, L., Gendron, E., Coustenis, A., Lai, O. Wittemberg, R., Sirdey, R.**, 1997. Spatially resolved images of Titan by means of adaptive optics. *Icarus* **129**, 482-497.
19. **Taylor, F. W., Coustenis, A.**, 1998. Titan in the Solar System. *Plan. Space Sci.* **46**, 1085-1097.
20. **Cerroni, P., Coradini, A., Coustenis, A., Taylor, F.**, 1998. The Cassini/Huygens mission to Titan and the Saturnian System. *Planet. Space Sci.* **46**, 1077-1421.
21. **Coustenis, A., Salama, A., Lellouch, E., Encrenaz, Th., Bjoraker, G., Samuelson, R. E., de Graauw, Th., Feuchtgruber, H., Kessler, M. F.**, 1998. Evidence for water vapor in Titan's atmosphere from ISO/SWS data. *Astron. Astrophys.* **336**, L85-L89.
22. **Coustenis, A., Schmitt, B., Khanna, R., Trotta, F.**, 1999. Plausible condensates in Titan's stratosphere from Voyager IR spectra. *Plan. Space Sci.* **47**, 1305-1329.
23. **Rauer, H., Bockelée-Morvan, D., Coustenis, A., Guillot, T., Schneider, J.**, 2000. Search for an exosphere around 51 Peg B with ISO. *Astron. Astrophys.* **355**, 573-580.

24. McKay, C. P., Coustenis, A., Samuelson, R. E., Lemmon, M. T., Lorenz, R. D., Cabane, M., Rannou, P., Drossart, P., 2001. The physical properties of the organic aerosols and clouds on Titan. *Planet. Space Sci.* **49**, 79-100.
25. Lellouch, E., Laureijs, R., Schmitt, B., Quirico, E., de Bergh, C., Crovisier, J., Coustenis, A., 2000. Pluto's non isothermal surface. *Icarus* **147**, 220-250.
26. Moutou, C., Coustenis, A., Schneider, J., St Gilles, R. Mayor, M., Queloz, D., Kaufer, A., D'Odorico, S., 2001. Search for spectroscopical signatures of transiting HD209458b's exosphere. *Astron. & Astrophys.* **371**, 260.
27. Coustenis, A., Gendron, E., Lai, O., Véran, J.-P., Woillez, J., Combes, M., Vapillon, L., Fusco, Th., Mugnier, L., Rannou, P., 2001. Images of Titan at 1.3 and 1.6 microns with adaptive optics at the CFHT. *Icarus* **154**, 501-515.
28. Fulchignoni M., Ferri F., Angrilli F., Bar-Nun A., Barucci, A., Bianchini G., Borucki W., Coradini M., Coustenis A., Falkner P., Flamini E., Grard R., Hamelin M., Harri A. M., Leppelmeier G. W., López-Moreno J. J., McDonnell J. A. M., McKay C. P., Neubauer F. H., Pedersen A., Picardi G., Pirronello V., Rodrigo R., Schwingenschuh K., Seiff A., Svedhem H., Vanzani V., Zarnecki J., 2002. The Characterisation of Titan's Atmospheric Physical Properties by the Huygens Atmospheric Structure Instrument (Hasi). *Space Science Reviews* **104**, 395-434.
29. Mousis, O., Gautier, D., Coustenis, A., 2002. The D/H ratio in methane in Titan: Origin and History. *Icarus* **159**, 156-169.
30. Wilson, E. H., Atreya, S. K., Coustenis, A., 2003. Mechanisms for the formation of benzene in the atmosphere of Titan. *J. Geophys. Res. – Planets* **108**(E2), 5014-5024.
31. Coustenis, A., Salama, A., Schulz, B., Ott, S., Lellouch, E., Encrenaz, Th., Gautier, D., Feuchtgruber, H. 2003. Titan's atmosphere from ISO mid-infrared spectroscopy. *Icarus*, **161**, 383-403.
32. Lellouch, E., Coustenis, A., Sebag, B., Cuby, J.-G., Lopez-Valverde, M., Fouchet, T., Crovisier, J., Schmitt, B., 2003. Titan's 5-micron window: observations with the very large telescope. *Icarus* **162**, 125-142.
33. Moutou, C., Coustenis, A., Schneider, J., Queloz, D., Mayor, M., 2003. Search for the HeI absorption feature in the transmission spectrum of HD209458. *Astron. Astroph.* **405**, 341-348.
34. Bernard, J.-M., Coll, P., Coustenis, A., Raulin, F., 2003. Experimental simulation of Titan's atmosphere : detection of ammonia and ethylene oxide. *Plan. Space Sci.* **51**, 1003-1011.
35. Flasar, F. M., Kunde, V. G., Achterberg, R. K., Conrath, B. J., Simon-Miller, A. A., Nixon, C. A., Gierasch, P. J., Romani, P. N., Bézard, B., Irwin, P., Bjoraker, G. L., Brasunas, J. C., Jennings, D. E., Pearl, J. C., Smith, M. D., Orton, G. S., Spilker, L. J., Carlson, R., Calcutt, S. B., Read, P. L., Taylor, F. W., Parrish, P., Barucci, A., Courtin, R., Coustenis, A., Gautier, D., Lellouch, E., Marten, A., Prangé, R., Biraud, Y., Fouchet, T., Ferrari, C., Owen, T. C., Abbas, M. M., Samuelson, R. E., Raulin, F., Ade, P., Césarsky, C. J., Grossman, K. U., Coradini, A., 2004. An intense stratospheric jet on Jupiter. *Nature* **427**, 132-135.
36. Lellouch, E., Schmitt, B., Coustenis, A., Cuby, J.-G. 2004. Titan's 5-micron lightcurve. *Icarus* **168**, 209-214.
37. Gendron, E., Coustenis, A., Drossart, P., Combes, M., Hirtzig, M., Lacombe, F., Rouan, D., Collin, C., Pau, S., Lagrange, A.-M., Mouillet, D., Rabou, P., Fusco, Th., Zins, S., 2004. VLT/NACO adaptive optics imaging of Titan. *Astron. Astroph.* **417**, L21-L24.
38. Flasar, F. M., Kunde, V. G., Abbas, M. M., Achterberg, R. K., Ade, P., Barucci, A., Bézard, B., G. L. Bjoraker, G. L., Brasunas, J. C., Calcutt, S. Carlson R., Césarsky, C., Conrath, B. J., Coradini, A., Courtin, R., Coustenis, A., et al., 2004. Exploring the Saturn System in the thermal infrared : the Composite Infrared Spectrometer. *Space Sci. Rev.* **115**, 169-297.
39. Kunde, V. G., Flasar, F. M., Jennings, D. E., Bezard, B., Strobel, D. F., Conrath, B. J., Nixon, C. A., Bjoraker, G. L., Romani, P. N., Achterberg, R. K., Simon-Miller, A. A., Irwin, P., Brasunas, J. C., Pearl, J. C., Smith, M. D., Orton, G. S., Gierash, P. J., Spilker, L. J., Carlson, R. C., Matmoukine, A. A., Calcutt, S. B., Read, P. L., Taylor, F. W., Fouchet, T., Parrish, P., Barucci, A., Courtin, R., Coustenis, A., et 14 autres auteurs, 2004. Jupiter's atmospheric composition from the Cassini thermal infrared spectroscopy experiment. *Science* **305**, 1582-1586.
40. Hirtzig, M., Coustenis, A., Lai, O., Emsellem, E., Pecontal-Rousset, A., Rannou, P., Negrao, A., Schmitt, B., 2005. Near-infrared study of Titan's resolved disk in spectro-imaging with CFHT/OASIS. *Plan. Space Sci.* **53**, 535-556.
41. Flasar, F. M., Achterberg, R. K., Conrath, B. J., Bjoraker, G. L., Jennings, D. E., Pearl, J. C., Romani, P. N., Simon-Miller, A. A., Kunde, V. G., Nixon, C. A., Bézard, B., Orton, G. S., Spilker, L. J., Irwin, P., Teanby, N. A., Spencer, J. A., Owen, T. C., Brasunas, J. C., Segura, M. E., Carlson, R., Matmoukine, A., Gierasch, P. J., Schindler, P. J., Ferrari, C., Showalter, M. R., Barucci A., Courtin R., Coustenis A., Fouchet T., Gautier D., Lellouch E., Marten A., Prangé, R., Strobel, D. F., Calcutt S. B., Read P. L., Taylor F. W., Bowles, N., Samuelson R. E., Abbas M. M., Raulin F., Ade P., Edgington, S., Pilorz, S., Wallis, B., Wishnow, E. 2005. Temperatures, winds, and composition in the Saturnian system. *Science*, **307**, 1247-1251.
42. Lopez-Valverde, M. A., Lellouch, E., Coustenis, A., 2005. Carbon monoxide fluorescence from Titan's atmosphere. *Icarus* **175**, 503-521.
43. Kazeminejad, B., Lammer, H., Coustenis, A., Fischer, G., Schwingenschuh, K., Rucker, H. O., 2005. Temperature variations in Titan's upper atmosphere: impact on Cassini/Huygens. *Ann. Geophys.* **23**, 1183-1189.
44. Flasar, F. M., Achterberg R. K., Conrath B. J., Gierasch, P. J., Kunde V. G., Nixon C. A., Bjoraker G. L., Jennings D. E., Romani P. N., Simon-Miller A. A., Bézard B., Coustenis A., Irwin P. G. J., Teanby, N. A., Brasunas J., Pearl J. C., Segura, M. E., Carlson, R., Matmoukine, A., Schindler, P. J., Barucci A., Courtin R., Fouchet T., Gautier D., Lellouch E., Marten A., Prangé, R., Vinatier, S., Strobel, D. F., Calcutt S. B., Read P. L.,

- Taylor, F. W., Bowles, N., Samuelson R. E., Orton G. S., Spilker L. J., Owen T. C., Spencer, J. A., Showalter, M. R., Ferrari, C., Abbas M. M., Raulin F., Edgington, S., Ade P., Wishnow, E. H., 2005. Titan's atmospheric temperatures, winds, and composition. *Science*, 308, 975-978.
45. Coustenis, A., 2005. Formation and evolution of Titan's atmosphere. *Space Sci. Rev.* **116**, 171-184.
46. Coustenis, A., Hirtzig, M., Gendron, E., Drossart, P., Lai, O., Combes, M., Negrão, A., 2005. Maps of Titan's surface from 1 to 2.5 micron. *Icarus* **177**, 89-105.
47. Fulchignoni, M., Ferri, F., Angrilli, F., Ball, A.J., Bar-Nun, A., Barucci, M. A., Bettanini, C., Bianchini, G., Borucki, W., Colombatti, G., Coradini, M., Coustenis, A., Debei, S., Falkner, P., Fanti, G., Flamini, E., Gaborit, V., Grard, R., Hamelin, M., Harri, A. M., Hathi, B., Jernej, I., Leese, M. R., Lehto, A., Lion Stoppato, P. F., Lopez-Moreno, J. J., Mäkinen, T., McDonnell, J.A. M., McKay, C. P., Molina-Cuberos, G., Neubauer, F. M., Pirronello, V., Rodrigo, R., Saggin, B., Schwingenschuh, K., Seiff, A., Simoes, F., Svedhem, H., Tokano, T., Towner, M. C., Trautner, R., Withers, P., Zarnecki, J. C., 2005. Titan's physical characteristics measured by the Huygens Atmospheric Instrument (HASI). *Nature* **438**, 785-791.
48. Tomasko, M. G., Archinal, B., Becker, T., Bézard, B., Bushroë, M., Combes, M., Cook, D., Coustenis, A., deBergh, C., Dafeo, L.E., Doose, L., Douté, S., Eib, A., Engel, S., Gliem, F., Greiger, B., Holso, K., Howington-Krause, A., Karkoschka, E., Keller, U., Keuppers, M., Kirk, R., Kramm, R., Lellouch, E., Lemmon, M., Lunine, J., Markiewicz, W., McFarlane, L., Moores, R., Prout, M., Rizk, B., Rosiek, M., Rueffer, P., Schroeder, S., Schmitt, B., Smith, P., Soderblom, L., Thomas, N., West, R., 2005. Results from the Descent Imager/Spectral Radiometer (DISR) Instrument on the Huygens Probe of Titan. *Nature* **438**, 765-778.
49. Coustenis, A., Negrão, A., Salama, A., Schulz, B., Lellouch, E., Rannou, P., Drossart, P., Encrenaz, Th., Schmitt, B., Boudon, V., Nikitin, A., 2006. Titan's 3-micron spectral region from ISO high-resolution spectroscopy. *Icarus* **180**, 176-185.
50. Teanby, N. A., Irwin, P. G. J., de Kok, R., Nixon, C. A., Coustenis, A., Bézard, B., Calcutt, S. B., Bowles, N. E., Flasar, F. M., Fletcher, L., Howett, C., Taylor F. W., 2006. Latitudinal variations of HCN, HC<sub>3</sub>N and C<sub>2</sub>N<sub>2</sub> in Titan's stratosphere derived from Cassini CIRS data. *Icarus* **181**, 243-255.
51. Hartung, M., Herbst, T.M., Dumas, C., Coustenis, A., 2006. Limits to the abundance of CO<sub>2</sub> ice on Titan. *J. Geophys. Res. Planets* **111**, E07S09 (7 pages).
52. Witasse, O., Lebreton, J.-P., Bird, M., Dutta-Roy, R., et al., Coustenis, A., et 21 autres co-auteurs, 2006. Overview of the coordinated ground-based observations of Titan during the Huygens mission. *J. Geophys. Res. Planets* **111**, E07S01 (12 pages).
53. Hirtzig, M., Coustenis, A., Gendron, E., Drossart, P., Negrão, A., Combes, M., Lai, O., Rannou, P., Lebonnois, S., Luz, D., 2006. Monitoring atmospheric phenomena on Titan. *Astron. Astrophys.* **456**, 761-774.
54. Griffith, C. A., Penteadó, P., Rannou, P., Brown, R., Boudon, V., Baines, K., Clark, R., Drossart, P., Buratti, B., Nicholson, P., Jaumann, R., McKay, C. P., Coustenis, A., Negrão, A., 2006. Evidence for ethane clouds on Titan from Cassini VIMS observations. *Science* **313**, 1620-1622.
55. Negrão, A., Coustenis, A., Lellouch, E., Maillard, J. -P., Rannou, Combes, M., Schmitt, B., McKay, C. P., Boudon, V., 2006. Titan's surface albedo from near-infrared CFHT/FTS spectra: modeling dependence on the methane absorption. *Plan. Space Sci.* **54**, 1225-1246.
56. Hirtzig, M., Coustenis, A., Gendron, E., Drossart, P., Hartung, M., Negrão, A., Rannou, Combes, M., 2007. Titan: atmospheric and surface features as observed with NAOS/CONICA at the time of the Huygens' landing. *J. Geophys. Res. Planets* **112**, E02S91.
57. Negrão, A., Hirtzig, M., Coustenis, A., Gendron, E., Drossart, P., Rannou, Combes, M., Boudon, V., 2007. 2-micron spectroscopy of Huygens' landing site on Titan with VLT/NACO. *J. Geophys. Res. Planets* **112**, E02S92.
58. Vinatier, S., Bézard, B., Fouchet, Th., Teanby, N. A., de Kok, R., Irwin, P. G. J., Conrath, B. J., Nixon, C. A., Romani, P. N., Flasar, F. M., Coustenis, A., 2007. Vertical abundance profiles of hydrocarbons in Titan's atmosphere at 15°S and 80°N retrieved from Cassini/CIRS spectra. *Icarus* **188**, 120-138.
59. Coustenis, A., Achterberg, R., Conrath, B., Jennings, D., Marten, A., Gautier, D., Bjoraker, G., Nixon, C., Romani, P., Carlson, R., Flasar, M., Samuelson, R. E., Teanby, N., Irwin, P., Bézard, B., Orton, G., Kunde, V., Abbas, M., Courtin, R., Fouchet, Th., Hubert, A., Lellouch, E., Mondellini, J., Taylor, F. W., Vinatier, S., 2007. The composition of Titan's stratosphere from Cassini/CIRS mid-infrared spectra. *Icarus* **189**, 35-62.
60. Lavvas, P. P., Coustenis, A., Vardavas, I. M., 2008a. Coupling photochemistry with haze formation in Titan's atmosphere. Part I: Model description. *Plan. Space Sci.* **56**, 27-66.
61. Lavvas, P. P., Coustenis, A., Vardavas, I. M., 2008b. Coupling photochemistry with haze formation in Titan's atmosphere. Part II: Results and Validation with Cassini/Huygens data. *Plan. Space Sci.* **56**, 67-99.
62. Teanby, N. A., Irwin, P. G. J., de Kok, R., Nixon, C. A., Coustenis, A., Royer, E., Calcutt, S. B., Bowles, N. E., Fletcher, L., Howett, C., Taylor, F. W., 2008. Global and temporal variations hydrocarbons and nitriles in Titan's stratosphere for northern winter observed by Cassini/CIRS. *Icarus* **193**, 595-611.
63. Jacquinet-Husson, N., Scott, N. A., Chédin, A., Crépeau, L., Armante, R., Capelle, V., Orphal, J., Coustenis, A., Barbe, A., Birk, M., Brown, L. R., et 40 auteurs, 2008. The GEISA spectroscopic database: Current and future archive for Earth's planetary atmosphere studies. *JQSRT* **109**, 1043-1059.

64. Jacquemart, D., Lellouch, E., Bézard, B., de Bergh, C., Coustenis, A., Lacôme, N., Schmitt, B., Tomasko, M., 2008. New laboratory measurements of CH<sub>4</sub> in Titan's conditions and a reanalysis of the DISR near-surface spectra at the Huygens landing site. *Plan. Space Sci.* **56**, 613-623.
65. Nixon, C. A., Achterberg, R.K., Vinatier, S., Bézard, B., Coustenis, A., Teanby, N. A., de Kok, R., Romani, P. N., Jennings, D. E., Bjoraker, G. L., Flasar, F.M. 2008. The <sup>12</sup>C/<sup>13</sup>C ratio in Titan hydrocarbons from Cassini/CIRS Infrared Spectra. *Icarus* **195**, 778-791.
66. Nixon, C.A., Jennings, D.E., Bézard, B., Teanby, N.A., Achterberg, R.K., Coustenis, A., Vinatier, S., Irwin, P.G.J., Romani, P. N., Flasar, F.M., 2008. Isotopic ratios in Titan's atmosphere from Cassini CIRS limb sounding : CO<sub>2</sub> at low and midlatitudes. *The Astrophys. J. Let.* **681**, L101-L103.
67. Jennings, D.E., Nixon, C.A., Jolly, A., Bézard, B., Coustenis, A., Vinatier, S., Irwin, P.G.J., Teanby, N.A., Romani, P. N., Achterberg, R.K., Flasar, F.M., 2008. Isotopic ratios in Titan's atmosphere from Cassini CIRS limb sounding : HC<sub>3</sub>N in the north. *The Astrophys. J. Let.* **681**, L109-L111.
68. Coustenis, A., Jennings, D., Jolly, A., Bénilan, Y., Nixon, C., Gautier, D., Vinatier, S., Bjoraker, G., Romani, P., 2008. Detection of C<sub>2</sub>HD and the D/H ratio on Titan. *Icarus* **197**, 539-548, 10.1016/j.icarus.2008.06.003.
69. Crespín, A., Lebonnois, S., Vinatier, S., Bézard, B., Coustenis, A., Teanby, N. A., Achterberg, R. K., Rannou, P., 2008. Diagnostics of Titan's stratospheric dynamics using CIRS/Cassini data and the IPSL General Circulation Model. *Icarus* **197**, 556-571, doi:10.1016/j.icarus.2008.05.010.
70. Liu, X., Li, J., Coustenis, A., 2008. A transposable Planetary General Circulation Model (PGCM) and its preliminary application to Titan. *Plan. Space Sci.* **56**, 1618-1629.
71. Jennings, D. E., Flasar, F. M., Kunde, V. G., Samuelson, R. E., Pearl, J. C., Nixon, C. A., Carlson, R. C., Matmoukine, A. A., Brasunas, J. C., Guandique, E., Achterberg, R. K., Bjoraker, G. L., Romani, P. N., Segura, M. E., Albright, S. A., Elliott, M. H., Tingley, J. S., Calcutt, S., Coustenis, A., Courtin, R., 2009. Titan's surface brightness temperatures. *Astrophys. J. Let.* **691**, L103-L105.
72. Coustenis, A., Atreya, S., Balint, T., Brown, R. H., Dougherty, M., Ferri, F., Fulchignoni, M., Gautier, D., Gowen, R., Griffith, C., Gurvits, L., Jaumann, R., Langevin, Y., Leese, M., Lunine, J., McKay, C. P., Moussas, X., Müller-Wodarg, I., Neubauer, F., Owen, T., Raulin, F., Sittler, E., Sohl, F., Sotin, C., Tobie, G., Tokano, T., Turtle, E., Wahlund, J.-E., Waite, H., Baines, K., Blamont, J., Dandouras, I., Krimigis, T., Lellouch, E., Lorenz, R., Morse, A., Porco, C., Hirtzig, M., Saur, J., Coates, A., Spilker, T., Zarnecki, J., et 113 co-auteurs, 2009. TandEM: Titan and Enceladus mission. *Experimental Astronomy* **23**, 893-946.
73. Marty, B., Guillot, T., Coustenis, A., et 65 autres auteurs, 2009. KRONOS: exploring the depths of Saturn with probes and remote sensing through an international mission. *Experimental Astronomy* **23**, 947-976. DOI : 10.1007/s10686-008-9094-9
74. Blanc, M., Pappalardo, R., Fujimoto, M., Sasaki, S., Zelenyi, L., Alibert, Y., André, N., Atreya, S., Beebe, R., Benz, W., Coradini, A., Coustenis, A., Dehant, V., Dougherty, M., Drossart, P., Grasset, O., Gurvits, L., Hartogh, P., Hussmann, H., Kasaba, Y., Kivelson, M., Khurana, K., Krupp, N., Louarn, Ph., Lunine, J., McGrath, M., Mimoun, D., Mousis, O., Oberst, J., Okada, T., Prieto-Bellestros, O., Prieur, D., Regnier, P., Roos-Serote, M., Schubert, G., Sotin, Ch., Spilker, T., Takahashi, Y., Takashima, T., Tosi, F., Turrini, D., van Hoolst, T., 2009. Laplace: a mission to Europa and the Jupiter system for ESA's Cosmic Vision programme. *Experimental Astronomy* **23**, 849-892.
75. Coustenis, A., Hirtzig, M., 2009. Cassini-Huygens results on Titan's surface. *Res. Astron. Astrophys.* **9**, 249-268.
76. Lebreton, J-P., Coustenis, A., Lunine, J., Raulin, F., Owen, T., Strobel, D., 2009. Results from the Huygens probe on Titan. *Astron. & Astrophys. Rev.* **17**, 149-179.
77. Lammer, H., Bredehoft, J. H., Coustenis, A., Khodachenko, M. L., Kaltenecker, L., Grasset, O., Prieur, D., F. Raulin, F., Ehrenfreund, P., Yamauchi, Y., Wahlund, J.-E., Griebmeier, J.-M., Stangl, G., Cockell, C. S., Kulikov, Y. N., Grenfell, J. L., Rauer, H., 2009. What makes a planet habitable ? *Astron. & Astrophys. Rev.* **17**, 181-249, DOI : 10.1007/s00159-009-0019-z.
78. Coustenis, A., Lunine, J., Lebreton, J.-P., Matson, D., Erd, Ch., Reh, K., Beauchamp, P., Lorenz, R., Waite, H., Sotin, Ch., Gurvits, L., Hirtzig, M., 2009. Earth-based support for the Titan Saturn Mission. *Earth Moon and Planets* **105**, 135-142, DOI: 10.1007/s11038-009-9308-9.
79. Nixon, C. A., Jennings, D. E., Flaud, J.-M., Bézard, B., Teanby, N. A., Irwin, P. G. J., Ansty, T. M., Coustenis, A., Flasar, F. M., 2009. Titan's prolific propane: the Cassini CIRS perspective. *Plan. Space Sci.* **57**, 1573-1585.
80. Coustenis, A., Jennings, D. E., Nixon, C. A., Achterberg, R. K., Lavvas, P., Vinatier, S., Teanby, N. A., Bjoraker, G. L., Carlson, R. C., Piani, L., Bampasidis, G., Flasar, F. M., Romani, P. N., 2010. Titan trace gaseous composition from CIRS at the end of the Cassini-Huygens prime mission. *Icarus* **207**, 461-476, DOI : 0.1016/j.icarus.2009.11.027.
81. Coustenis, A., Tokano, T., Burger, M. H., Cassidy, T. A., Lopes, R. M., Lorenz, R. D., Retherford, K. D., Schubert, G., 2010. Atmospheres/exospheres characteristics of icy satellites. *Space Sci. Rev.* **153**, 155-184.
82. Dalton, B., Cruikshank, D., Stephan, K., McCord, T., Coustenis, A., Carlson, R., Coradini, A., 2010. Chemical composition of icy satellite surfaces. *Space Sci. Rev.* **153**, 113-154.

83. Lellouch, E., Vinatier, S., Moreno, R., Allen, M., Gulkis, S., Hartogh, P., Krieg, J.-M., Maestrini, A., Mehdi, I., Coustenis, A., 2010. Sounding of Titan's atmosphere at submillimeter wavelengths from an orbiting spacecraft. *Planet. Space Sci.* **58**, 1724-1739.
84. Cours, T., Rannou, P., Coustenis, A., Hamdouni, A., 2010. A new analysis of the ESO Very Large Telescope (VLT) observations of Titan at 2  $\mu\text{m}$ . *Planet. Space Sci.* **58**, 1708-1714.
85. Coustenis, A., Atkinson, D., Balint, T., Beauchamp, P., Atreya, S., Lebreton, J.-P., Lunine, J., Matson, D., Erd, Ch., Reh, K., Spilker, T., Elliott, J., Hall, J., Strange, N., 2010. Atmospheric planetary probes and balloons in the solar system. *J. Aerospace Engineering* **225**, 154-180.
86. Nixon, C. A., Achterberg, R. K., Teanby, N. A., Irwin, P. G. J., Flaud, J.-M., Kleiner, I., Dehayem-Kamadjeu, A., Brown, L. R., Sams, R. L., Bézard, B., Coustenis, A., Ansty, T. M., Matmoukine, A., Vinatier, S., Bjoraker, G. L., Jennings, D. E., Romani, P. N., Flasar, F. M., 2010. Upper limits for undetected trace species in the stratosphere of Titan. *Royal Soc. Chem. (Faraday discussions)* **147**, 65.
87. Solomonidou, A., Bampasidis, G., Kyriakopoulos, K., Bratsolis, E., Hirtzig, M., Coustenis, A., Moussas, X., 2010. Imaging of potentially active geological regions on Saturn's moons Titan and Enceladus, using Cassini-Huygens data : with emphasis on cryovolcanism. *Hellenic Journal of Geosciences* **45**, 257-268.
88. Jennings, D. E., Cottini, V., Nixon, C. A., Flasar, F. M., Kunde, V. G., Samuleson, R. E., Romani, P. N., Hesman, B. E., Carlson, R. C., Goriuss, N. J. P., Coustenis, A., Tokano, T., 2011. Seasonal Changes in Titan's Surface Temperatures. *Astroph. J. Lett.*, **737**, L15.
89. Solomonidou, A., Coustenis, A., Bampasidis, G., Kyriakopoulos, K., Moussas, X., Bratsolis, E., Hirtzig, M., 2011. Water Oceans of Europa and Other Moons : Implications For Life in Other Solar Systems *J. of Cosmology*, **13**, <http://journalofcosmology.com/Planets103.html>.
90. de Bergh, C., Courtin, R., Bézard, B., Coustenis, A., Lellouch, E., Hirtzig, M., Rannou, P., Drossart, P., Campargue, A., Kassi, S., Wang, L., Boudon, V., Nikitin, A., Tyuterev, V., 2012. Applications of a new methane linelist to the modeling of Titan's spectrum in the 1.58  $\mu\text{m}$  window. *Plan Space Sci.* **61**, 85-98.
91. Bratsolis, E., Bampasidis, G., Solomonidou, A., Coustenis, A., 2012. A despeckle filter for the Cassini Synthetic Aperture Radar images of Titan's surface. *Plan. Space Sci.* **61**, 108-113, doi:10.1016/j.pss.2011.04.003.
92. Jacquinet-Husson, N., Crépeau, L., Armante, R., Boutammine, C., Chédin, A., Scott, N. A., Crevoisier, C., Capelle, V., Boone, C., Poulet-Crovisier, N., Barbe, A., Campargue, A., Chris Benner, D., Bénilan, Y., Bézard, B., Boudon, V., Brown, L. R., Coudert, L. H., Coustenis, A., et 40 autres auteurs, 2012. The 2009 edition of the GEISA spectroscopic database. *J. Quant. Spectr. & Rad. Transfer* **112**, 2395-2445.
93. Li, J., Liu, D., Coustenis, A., Liu, X., 2012. Possible physical cause of the zonal wind collapse on Titan. *Plan. Space Sci.* **63**, 150-157.
94. Tinetti, G., Beaulieu, J.-P., Henning, T., Meyer, M., Micela, G., Ribas, I., Stam, D., Swain, M., Krause, O., Ollivier, M., Pace, E., Swinyard, B., Aylward, A., van Boeckel, R., Coradini, A., Encrenaz, T., Snellen, I., Zapatero-Osorio, M. R., Bouwman, J., Cho, J. Y.-K., Coudé du Foresto, V., Guillot, T., Lopez-Morales, M., Mueller-Wodarg, I., Palle, E., Selsis, F., Sozzetti, A., Ade, P.A.R., Achilleos, N., Adriani, A., Agnor, C. B., Afonso, C., Allende Prieto, C., Bakos, G., Barber, R. J., Barlow, M., Bernath, P., Bézard, B., Bordé, P., Brown, L.R., Cassan, A., Cavarro, C., Ciaravella, A., Cockell, C., Coustenis, A., et 91 autres co-auteurs, 2012. EChO : Exoplanet Characterisation Observatory. *Experimental Astronomy*, DOI : 10.1007/s10686-012-9303-4.
95. Campargue, A., Wang, L., Mondelain, D., Kassi, S., Bézard, B., Lellouch, E., Coustenis, A., de Bergh, C., Hirtzig, M., Drossart, P., 2012. An empirical line list for methane in the 1.26-1.71  $\mu\text{m}$  region for planetary investigations (T=80-300 K). Application to Titan. *Icarus* **219**, 110-128.
96. Nixon, C.A., Temelso, B., Vinatier, S., Teanby, N.A., Bézard, B., Achterberg, R.K., Mandt, K.E., Sherill, C.D., Irwin, P.G.J., Jennings, D.E., Romani, P.N., Coustenis, A., Flasar, F.M., 2012. Isotopic ratios in Titan's methane : measurements and modeling. *Astrophys. J.* **749**, article id. 159.
97. Jennings, D. E., Andreson, C. M., Samuelson, R. E., Flasar, F. M., Nixon, C. A., Kunde, V. G., Achterberg, R. K., Kottini, V., de Kok, R., Coustenis, A., Vinatier, S., Calcutt, S. B., 2012. Seasonal disappearance of far-infrared haze in Titan's stratosphere. *Astroph. J. Lett.*, **754** :L3.
98. Cottini, V., Jennings, D. E., Nixon, C. A., Anderson, C. M., Goriuss, N., Bjoraker, G. L., Coustenis, A., Achterberg, R. K., Teanby, N. A., de Kok, R., Irwin, P. G. J., Bézard, B., Lellouch, E., Flasar, F. M., Bampasidis, G., 2012. Water vapor in Titan's atmosphere from Cassini/CIRS infrared spectra. *Icarus* **220**, 855-862.
99. Teanby, N., A., Irwin, P. G. J., Nixon, C., de Kok, R., Vinatier, S., Coustenis, A., Sefton-Nash, E., Calcutt, S. B., Flasar, F. M., 2012. Active upper-atmosphere chemistry and dynamics from polar circulation reversal on Titan. *Nature*, **491**, 732-735.
100. Bampasidis, G., Coustenis, A., Achterberg, R. K., Vinatier, S., Lavvas, P., Nixon, C. A., Jennings, D. E., Teanby, N. A., Flasar, F. M., Carlson, R. C., Mousas, X., Preka-Papadema, P., Romani, P. N., Guardique, E. A., Stamogiorgos, S., 2012. Thermal and temperature structure variations in Titan's stratosphere during the Cassini mission. *Astroph. J.* **760**, Issue 2, article id. 144, 8 pp.
101. Jennings, D., Anderson, C. M., Samuelson, R. E., Flasar, F. M., Nixon, C. A., Bjoraker, G. L., Romani, P. N., Achterberg, R. K., Cottini, V., Hesman, B. E., Kunde, V. G., Carlson, R. C., de Kok, R., Coustenis, A., Vinatier, S., Bampasidis, G., Teanby, N. A., Calcutt, S. B., 2012. First observation in the South of Titan's far-infrared 220  $\text{cm}^{-1}$  cloud. *Astrophys. J. Lett.* **761**, Issue 1, article id. L15, 4 pp.

102. Grasset, O., Dougherty, M.K., Coustenis, A., Bunce, E.J., Erd, C., Titov, D., Blanc, M., Coates, A., Drossart, P., Fletcher, L., Hussmann, H., Jaumann, R., Krupp, N., Lebreton, J.-P., Prieto-Ballesteros, O., Tortora, P., Tosi, F., Van Hoolst, T., 2013. JUpiter ICy moons Explorer (JUICE): an ESA mission to orbit Ganymede and to characterise the Jupiter system. *Plan. Space Sci.* **78**, 1-21.
103. Solomonidou, A., Bampasidis, G., Hirtzig, M., Coustenis, A., Kyriakopoulos, K., St Seymour, K., Bratsolis, E., Moussas, X., 2013. Morphotectonics on Titan. *Plan. Space Sci.* **77**, 104-117.
104. Campargue, A., Leshchishina, O., Mondelain, D., Kassi, S., Coustenis, A., 2013. An improved empirical line list for methane in the region of the  $2\nu_3$  band at 1.66  $\mu\text{m}$ . *J. Quant. Spectr. & Rad. Transfer* **118**, 49–59.
105. Hirtzig, M., Bézard, B., Lellouch, E., Coustenis, A., de Bergh, C., Drossart, P., Campargue, A., Boudon, V., Tyuterev, V., Rannou, P., Cours, T., Kassi, S., Nikitin, A., Mondelain, D., Rodriguez, S., Le Mouélic, S., 2013. Titan's surface and atmosphere from Cassini/VIMS data with updated methane opacity. *Icarus* **226**, 470-486 et corrigendum 1182-1182.
106. Tinetti, G., Encrenaz, Th., Coustenis, A., 2013. Spectroscopy of planetary atmospheres in our Galaxy. *Astron. Astrophys. Rev.* **21**, article id. #63.
107. Nixon, C. A., Jennings, D. E., Bézard, B., Vinatier, S., Teanby, N. A., Sung, K., Ansty, T. M., Irwin, P. G. J., Gorius, N., Cottini, V., Coustenis, A., Flasar, F. M., 2013. Detection of propene in Titan's stratosphere. *Astrophys. J. Letters* **776**, article id. L14, 6 p.
108. Brown, L., Sung, K., Benner, D. C., Devi, V. M., Boudon, V., Gabard, T., Wenger, C., Campargue, A., Leshchishina, O., Kassi, S., Mondelain, D., Wang, L., Daumont, L., Régalia, L., Rey, M., Thomas, X., Tyuterev, V. I., Lyulin, O. M., Nikitin, A. V., Niederer, H. M., Albert, S., Bauerecker, S., Quack, M., O'Brien, J. J., Gordon, I. E., Rothman, L. S., Sasada, H., Coustenis, A., Smith, M. A. H., Carrington, T., Wang, X. G., Mantz, A. W., Spickler, P. T., 2013. Methane line parameters in the HITRAN 2012 database. *J. Quant. Spectr. & Rad. Transf.* **130**, 201-219.
109. Grasset, O., Bunce, E., Coustenis, A., Dougherty, M., Erd, C., Hussmann, H., Jaumann, R., Prieto-Ballesteros, O., 2013. Planetary protection requirements at Ganymede. *Astrobiology* **13**, issue 10, 991-1004.
110. Coustenis, A., Bampasidis, G., Achterberg, R. K., Lavvas, P., Nixon, C. A., Jennings, D. E., Teanby, N. A., Vinatier, S., Flasar, F. M., Carlson, R. C., Orton, G., Romani, P. N., Guardique, E. A., 2013. Evolution of the stratospheric temperature and chemical composition over one Titanian year. *Astrophys. J.* **799**, 177, 9p.
111. Sohl, F., Solomonidou, A., Wagner, F. W., Coustenis, A., Hussmann, H., Schulze-Makuch, D., 2014. Structural and Tidal models of Titan and inferences on cryovolcanism. *J. Geophys. Res. – Planets.* **119**, 1013-1036.
112. Solomonidou, A., Hirtzig, M., Coustenis, A., Bratsolis, E., Le Mouélic, S., Rodriguez, S., Stephan, K., Drossart, P., Sotin, C., Jaumann, R., Brown, R. H., Kyriakopoulos, K., Lopes, R. M. C., Bampasidis, G., Stamatelopoulos-Seymour, K., Moussas, X., 2014. Surface albedo spectral properties of geologically interesting areas on Titan. *J. Geophys. Res. – Planets.* **119**, Issue 8, 1729-1747.
113. Mitri, G., Coustenis, A., Fanchini, G., Hayes, A. G., Khurana, K., Lebreton, J.-P., Lopes, R. M., Lorenz, R. D., Iess, L., Meriggiola, R., Moriconi, M. L., Orosei, R., Sotin, C., Stofan, E., Tobie, G., Tokano, T., Tosi, F., 2014. The Exploration of Titan with an Orbiter and a Lake Probe. *Plan. Space Sci.* **104**, 78-92.
114. Mousis, O., Fletcher, L. N., Lebreton, J.-P., Wurz, P., Cavalié, T., Coustenis, A., Courtin, R., Gautier, D., Helled, R., Irwin, P. G. J., Morse, A. D., Nettelmann, N., Marty, B., Rousselot, P., Venot, O., Atkinsol, D. H., Waite, J. H., Reh, K., Simon-Miller, A., Atreya, S., André, N., Blanc, M., Daglis, I. A., Fischer, G., Geppert, W. D., Guillot, T., Hedman, M. M., Hueso, R., Lellouch, E., Lunine, J. I., Murray, C. D., O'Donoghue, J., Rengel, M., Sanchez-Lavega, A., Schmider, F.-X., Spigaa, A., Spilker, T., Petit, J.-M., Tiscareno, M. S., Ali-Dib, M., Altwegg, K., Bouquet, A., Briois, C., Fouchet, T., Guerlet, S., Kostiuik, T., Lebleu, D., Moreno, R., Orton, G. S., Poncey, J., 2014. Scientific rationale of Saturn's *in situ* exploration. *Plan. Space Sci.* **104**, 29-47.
115. Tobie, G., Teanby, N., Coustenis, A., Jaumann, R., Raulin, F., Schmidt, J., Carrasco, N., Coates, A. J., Cordier, D., De Kok, R., Geppert, W. D., Lebreton, J.-P., Lefevre, A., Livengood, T. A., Mandt, K. E., Mitri, G., Nimmo, F., Nixon, C. A., Norman, L., Pappalardo, R. T., Postberg, F., Rodriguez, S., Schulze-Makuch, D., Soderblom, J. M., Solomonidou, A., Stephan, K., Stophan, E. R., Turtle, E. P., Wagner, R. J., West, R. A., Westlake, J. H., 2014. Science goals and mission concept for a future exploration of Titan and Enceladus. *Plan. Space Sci.* **104**, 59-77.
116. Jennings, D., Achterberg, R. K., Cottini, V., Anderson, C. M., Flasar, F. M., Nixon, C. A., Bjoraker, G. L., Kunde, V. G., Carlson, R. C., Guandique, E., Kaelberer, M.S., Segura, M.E., de Kok, R., Coustenis, A., Vinatier, S., Bampasidis, G., Teanby, N. A., Calcutt, S. B., 2015. Evolution of the far-infrared ice cloud at Titan's South pole. *Astrophys. J. Lett.* **804**, issue 2, L34, 5 pp.
117. Encrenaz, T., Tinetti, G., Tessenyi, M., Drossart, P., Hartogh, P., Coustenis, A., 2015. Transit spectroscopy of exoplanets from space: How to optimize the wavelength coverage and spectral resolving power. *Experimental Astronomy* **40**, 523, DOI: 10.1007/s10686-014-9415-0.
118. Tinetti, G., Drossart, P., Eccleston, P., Hartogh, P., Isaak, K., Linder, M., Lovis, C., Micela, G., Ollivier, M., Puig, L., Ribas, I., Snellen, I., Allard, F., Swinyard, B., Barstow, J., Cho, J., Coustenis, A., et al., 2015. The ECHO science case. *Exper. Astron.*, 2015arXiv150205747T, DOI: 10.1007/s10686-015-9484-8.

119. Jennings, D.E., Cottini, V., Nixon, C.A., Achterberg, R.K., Flasar, F.M., Kunde, V.G., Romani, P.N., Samuelson, R.E., Matmoukine, A., Goriuss, N.J.P., Coustenis, A., Tokano, T., 2016. Surface Temperatures on Titan during Northern Winter and Spring. *Astroph. J.*, **816**, L17, 4pp.
120. Coustenis, A., 2016. Titan's organic chemistry: a planetary-scale observatory to study primitive Earth. *Métode Science Studies Journal - Annual Review, Univ. of Valencia* **6**, 175-181, DOI: 10.7203/metode.6.4999.
121. Solomonidou, A., Coustenis, A., Hirtzig, M., Rodriguez, S., Stephan, K., Lopes, R. M. C., Drossart, P., Sotin, C., Le Mouélic, S., Lawrence, K., Bratsolis, E., Jaumann, R., Brown, R. H., 2016. Temporal variations of Titan's surface with Cassini/VIMS. *Icarus* **270**, 85-99.
122. Coustenis, A., Jennings, D. E., Achterberg, R. K., Bampasidis, G., Lavvas, P., Nixon, C. A., Teanby, N. A., Anderson, C. M., Flasar, F. M., 2016. Titan's temporal evolution in stratospheric trace gases near the poles. *Icarus* **270**, 409-420.
123. Lopes, R.M.C., Malaska, M.J., Solomonidou, A., Le Gall, A., Janssen, M., Neish, C.D., Turtle, E.P., Birsch, S.P.D., Hayes, A.G., Radebaugh, J., Coustenis, A., Stiles, B.W., Kirk, R.L., Mitchell, K.L., Lawrence, K., 2016. Nature, distribution and origin of Titan's undifferentiated plains. *Icarus* **270**, 162-182.
124. Mousis, O., Atkinson, D.H., Spilker, T., Venkatapathy, E., Poncy, J., Frampton, R., Coustenis, A., Reh, K., Lebreton, J.-P., Fletcher, L., Hueso, R., Amato, M., Colaprete, T., Ferri, F., Stam, D., Wurz, P., Atreya, S., Aslam, S., Banfield, D., Calcutt, S., Fischer, G., Holland, A., Keller, C., Kessler, E., Leese, M., Levacher, P., Morse, A., Munoz, O., Renard, J.-B., Sheridan, S., Schmider, F.-X., Snik, F., Waite, J.H., Bird, M., Cavalié, T., Deleuil, M., Fortney, J., Gautier, D., Guillot, T., Lunine, J.I., Marty, B., Nixon, C., Orton, G.S., Sanchez-Lavega, A., 2016. The Hera Saturn Entry Probe Mission. *Planet. Space Sci.* **130**, 80-103.
125. Plainaki, Ch., Radioti, A., Andriopoulou, M., Lilensten, J., Millilo, A., Dandouras, I., Nordheim, T., Massetti, S., Coustenis, A., Grassi, D., Mangano, V., Orsini, S., 2016. Bridging space weather to planetary environments. *J. Space Weather & Space Climate* **6**, A31. DOI: 10.1051/swsc/2016024.
126. Jennings, D.E., Flasar, F.M., Kunde, V.G., Nixon, C.A., Segura, M.E., Aslam, S., Goriuss, N.J.P., Albright, S., Mamoutkine, A.A., Carlson, R., Guandique, E., Kaelberer, M. S., Brasunas, J.C., Achterberg, R.K., Romani, P.N., Bjoraker, G.L., Anderson, C.M., Cottini, V., Hesman, B.E., Barney, R.D., Pearl, J. C., Smith, M.D., Calcutt, S., Vellacott, T.J., Spilker, L.J., Edgington, S.G., Brooks, S.M., Ade, P., Schinder, P.J., Coustenis, A., Courtin, R., Michel, G., Fettig, R., Pilorz, S., Ferrari, C., 2017. The Composite Infrared Spectrometer (CIRS) on Cassini. *Applied Optics* **56**, no 18, 5274-5294.
127. Mousis, O., Atkinson, D., Cavalié, Th., Fletcher, L., Amato, M., Aslam, S., Ferri, F., Renard, J.-B., Spilker, T., Venkatapathy, E., Wirz, P., Aplin, K., Coustenis, A., et 44 co-auteurs, 2018. Scientific rationale for Uranus and Neptune in situ exploration. *Plan. Space Sci.* **155**, 12-40.
128. Rey, M., Nikitin, A., Bézard, B., Rannou, P., Coustenis, A., Tyuterev, V., 2018. New accurate theoretical line lists of  $^{12}\text{CH}_4$  and  $^{13}\text{CH}_4$  in the 0-13400  $\text{cm}^{-1}$  range: application to the modeling of methane absorption in Titan's atmosphere. *Icarus* **303**, 114-130.
129. Coustenis, A., Jennings, D. E., Achterberg, R. K., Bampasidis, G., Nixon, C. A., Cottini, V., Flasar, F. M., 2018. Seasonal evolution of Titan's stratosphere near the poles. *Astroph. J., Lett.*, **854**, no2, L30.
130. Solomonidou, A., Coustenis, A., Lopes, R.M.C., Malaska, M.J., Rodriguez, S., Drossart, P., Elachi, C., Schmitt, B., Philippe, S., Janssen, M., Hirtzig, M., Wall, S., Sotin, C., Lawrence, K., Altobelli, N., Bratsolis, E., Radebaugh, J., Stephan, K., Brown, R.H., S. Le Mouélic, S., Le Gall, A., illanueva, E.V., Brossier, J.F., Bloom, A.A., Witasse, O., Matsoukas, C., Schoenfeld, A., 2018. The Spectral Nature of Titan's Major Geomorphological 1 Units : Constraints on Surface Composition. *J. Geophys. Res.- Planets* **123**, 489-507. DOI: 10.1002/2017JE005477.
131. Brossier, J.F., Rodriguez, S., Cornet, T., Lucas, A., Radebaugh, J., Maltagliati, L., Le Mouélic, S., Solomonidou, A., Coustenis, A., Hirtzig, M., Jaumann, R., Stephan, K., Brown, R.H., 2018. Geological Evolution of Titan's Equatorial Regions: Possible Nature and Origin of the Dune Material. *J. Geophys. Res.-Planets* **123**, 1089-1112.
132. Encrenaz, Th., Tinetti, G., Coustenis, A., 2018. Transit spectroscopy of temperate Jupiters with ARIEL: a feasibility study. *Exp. Astron.* **46**:31, DOI :10.1007/s10686-017-9561-2
133. Tinetti, G., Drossart, P., Eccleston, P., Hartogh, P., Heske, A., Leconte, J., Micela, G., Ollivier, M., Pilbratt, G., Puig, L., Turrini, D., Vandenbussche, B., Wolkenberg, P., Beaulieu, J.-P., Griffin, M., Guedel, M., Min, M., Nørgaard-Nielsen, H.-U., Rataj, M., Ray, T., Ribas, I., Swain, M., Burleigh, M., Cho, J., Coudé du Foresto, V., Coustenis, A., et al., 2018. A chemical survey of exoplanets with ARIEL. *Exp. Astron.* **46**, 135-209. <https://doi.org/10.1007/s10686-018-9598-x>.
134. Mitri, G., Postberg, F., Soderblom, J. M., Wurz, P., Tortora, P., Abel, B., Barnes, J. W., Berga, M., Carrasco, N., Coustenis, A., Paul de Vera, J.P., D'Ottavio, A., Ferri, F., Hayes, A.G., Hayne, P.O., Hillier, J.K., Kempf, S., Lebreton, J.-P., Lorenz, R.D., Martelli, A., Orosei, R., Petropoulos, A.E., Reh, K., Schmidt, J., Sotin, C., Srama, R., Tobie, G., Vorburget, A., Vuitton, V., Wong, A., Zannoni, M., 2018. Explorer of Enceladus and Titan (E2T): Investigating ocean worlds' evolution and habitability in the solar system. *Plan. Space Sci.* **155**, 73-90.
135. Rodriguez, S., Le Mouélic, S., Barnes, J.W., Kok, J.F., Rafkin, S., Lorenz, R.D., Charnay, B., Radebaugh, J., Narteau, C., Cornet, T., Bourgeois, O., Lucas, A., Rannou, P., Griffith, C.A., Coustenis, A., Appéré, T., Hirtzig, M., Sotin, C., Soderblom, J., Brown, R.H., Bow, J., Vixie, G., Maltagliati, L., Courrech du Pont, S., Jaumann, R.,

- Stephan, K., Baines, K.H., Buratti, B.J., Clark, R.N., Nicholson, P.D., 2018. Observational evidence for active dust storms on Titan at equinox. *Nature Geoscience* 11, 727–732.
136. Jennings, D.E., Tokano, T., Cottini, V., Nixon, C.A., Achterberg, R.K., Flasar, F.M., Kunde, V.G., Romani, P.N., Samuelson, R.E., Goriuss, N.J.P., Guandique, E., Kaelberer, M.S., Coustenis, A., 2019. Titan surface temperatures during the Cassini mission. *Astroph. J. Lett.* 877, issue 1, #L8, 6 pp.
137. Lopes, R.M.C., Wall, S., Elachi, C., Burch, S., Corlies, P., Coustenis, A., Hayes, A., Hofgartner, J., Janssen, M., Kirk, R., LeGall, A., Lorenz, R., Lunine, J., Malaska, M., Mastrogiuseppe, M., Mitri, G., Neish, K., Notanicola, C., Paganelli, F., Paillou, P., Poggiali, V., Radebaugh, J., Rodriguez, S., Schoenfeld, A., Soderblom, J., Solomonidou, A., et al., 2019. Titan as revealed by the Cassini RADAR. *Space Sci. Rev.* 215, issue 4, #33, 50 pp.
138. Lombardo, N.A., Nixon, C.A., Greathouse, T.K., Bézard, B., Jolly, A., Vinatier, S., Teanby, N.A.A., Richter, M.J., Irwin, P.J.G., Coustenis, A., Flasar, F.M., 2019. Detection of propadiene on Titan. *Astroph. J. Lett.* 881, Issue 2, article id. L33, 6 pp.
139. Nixon, C. A., Ansty, T.M., Lombardo, N.A., Bjoraker, G.L., Achterberg, R.K., Annex, A., Rice, M., Romani, P. N., Jennings, D. E., Coustenis, A., Bézard, B., Vinatier, S., Lellouch, E., Teanby, N. A., Cottini, V., Flasar, F.M., 2019. Cassini Composite Infrared Spectrometer (CIRS) Observations of Titan 2004-2017. *Astroph. J. Supp. Series* 244, Issue 1, article id. 14, 47 pp., DOI : [10.3847/1538-4365/ab3799](https://doi.org/10.3847/1538-4365/ab3799) ; [2019arXiv190712612N](https://arxiv.org/abs/2019arXiv190712612N)
140. Simon, A.A., Fletcher, L.N., Arridge, C., Atkinson, D., Coustenis, A., Ferri, F., Hofstadter, M., Masters, A., Mousis, O., Reh, K., Turrini, D., Witasse, O., 2020. A review of the in situ probe designs from recent Ice Giant mission concept studies. *Space Science Rev.*, 216, Issue 1, article id.17. DOI: [10.1007/s11214-020-0639-1](https://doi.org/10.1007/s11214-020-0639-1)
141. Solomonidou, A., Le Gall, A., Malaska, M.J., Birch, S.P.D., Lopes, R.M.C., Coustenis, A., Rodriguez, S., Wall, S.D., Michaelides, R.J., Nasr, M.R., Elachi, C., Hayes, A.G., Soderblom, J.M., Schoenfeld, A.M., Matsoukas, C., Drossart, P., Janssen, M.A., Lawrence, K.J., Witasse, O., Radebaugh, J., 2020. Spectral and emissivity analysis of the raised ramparts around Titan’s northern lakes. *Icarus* 344, 113413. <https://doi.org/10.1016/j.icarus.2019.05.040>.
142. Coustenis, A., Jennings, D., Achterberg, R., Lavvas, P., Bampasidis, G., Nixon, C.A., Flasar, F.M., 2020. Titan’s neutral atmosphere seasonal variations up to the end of the Cassini mission. *Icarus* 344, 113413. <https://doi.org/10.1016/j.icarus.2019.113413>.
143. Hand, K.P., Sotin, C., Hayes, A., Coustenis, A., 2020. On the habitability and future exploration of ocean worlds. *Space Sci. Rev.* 216, Issue 5, article id.95. DOI: [10.1007/s11214-020-00713-7](https://doi.org/10.1007/s11214-020-00713-7)
144. Solomonidou, A., Neish, C., Coustenis, A., Malaska, M., Le Gall, A., Lopes, R., Werynski, A., Lawrence, K., Atlobelli, N., Witasse, O., Shoenfeld, A., Matsoukas, C., Baziotis, I., Drossart, P., 2020. The chemical composition of impact craters on Titan: Implications for exogenic processing. *Astron. & Astrophys.* 641, A16.
145. Ferri, F., Colombatti, G., Aboudan, A., Bettanini, C., Debei, S., Harri, A.-M., Lebreton, J.-P., Montmessin, F., Berthelier, J.-J., LeGall, A., Modolo, R., Aplin, K., Coustenis, A., 2020. The atmospheric structure of the Ice Giant planets from in situ measurements by an entry probe. *Space Sci. Rev.* 216, 118. <https://doi.org/10.1007/s11214-020-00749-9>
146. Fletcher, L.N., Simon, A.A., Hofstadter, M.D., Cohen, I., Masters, A., Mandt, K., Coustenis, A., 2020. Ice Giant System Exploration in the 2020s: An Introduction. *Phil. Trans. Royal Soc. A.* 378, Issue 2187, article id.20190473. DOI:[10.1098/rsta.2019.0473](https://doi.org/10.1098/rsta.2019.0473). arXiv:2008.12125.
147. Encrenaz, Th., Coustenis, A., Gilli, G., Marcq, E., Molaverdikhani, K., Mugnai, L. V., Ollivier, M., Tinetti, G., 2021. Observability of temperate exoplanets with ARIEL. *Exp. Astronomy* 53 Issue 2, p.375-390 (avril 2022), DOI: [10.1007/s10686-021-09793-x](https://doi.org/10.1007/s10686-021-09793-x)
148. Rodriguez, S., Vinatier, S., Cordier, D., Tobie, G., Achterberg, R.K., Anderson, C., Badman, Barnes, J.W., Barth, E.L., Bézard, B., Carrasco, N., Charnay, B., Clark, R.N., Coll, P., Cornet, T., Coustenis, A., et 21 co-auteurs, 2022. Science goals and new mission concepts for a future exploration of Titan’s atmosphere, geology and habitability: Titan Polar Scout/orbiteEr and In situ DrONe fleet (POSEIDON). *Exp. Astronomy*, <https://doi.org/10.1007/s10686-021-09815-8>.
149. Gordon, I. E., Rothman, L. S., Hargreaves, R. J., Hashemi, R., Karlovets, E. V., Skinner, F. M., Conway, E. K., Hill, C., Kochanov, R. V., Tan, Y., Wcislo, P., Finenko, A. A., Nelson, K., Bernath, P. F., Birk, M., Boudon, V., Campargue, A., Chance, K.V., Coustenis, A. et 69 co-auteurs, 2022. The HITRAN2020 molecular spectroscopic database. *J. Quant. Spectrosc. Radiat. Transfer* 277, article id. 107949. DOI: [10.1016/j.jqsrt.2021.107949](https://doi.org/10.1016/j.jqsrt.2021.107949)
150. Cohen, I.J., Beddingfield, C., Robert Chancia, R., DiBraccio, G., Hedman, M., MacKenzie, S., Mauk, B., Sayanagi, K.M., Soderlund, K.M., Turtle, E., Ahrens, C., Arridge, C.S., Brooks, S.M., Bunce, E., Charnoz, S., Coustenis, A., et 21 auteurs, 2022. The case for a New Frontiers-class Uranus Orbiter: System science at an underexplored and unique world with a mid-scale mission. *Plan. Sci. J.*, Vol. 3, Issue 3, id.58, 14 pp. DOI: 10.3847/PSJ/ac5113
151. Mousis, O., Bouquet, A., Langevin, Y., André, N., Boithias, H., Durry, G., Faye, F., Hartogh, P., Helbert, J., Iess, L., Kempf, S., Masters, A., Postberg, F., Renard, J.-B., Vernazza, P., Vorburger, A., Worz, P., Atkinson, D.H., Barabash, S., Berthomier, M., Brucato, J., Cable, M., Carter, J., Cazaux, S., Coustenis, A., et 28 auteurs, 2022. Moonraker – Enceladus Multiple Flyby Mission. *Plan. Sci. J.*, Vol. 3, Issue 12, id.268, 12 pp. 10.48550/arXiv.2211.00721.



152. Mousis, O., Atkinson, D. H., Ambrosi, R., Atreya, S., Banfield, D., Barabash, S., Blanc, M., Cavalié, T., **Coustenis, A.**, Deleuil, M., Durré, G., Ferri, F., Fletcher, L. N., Fouchet, T., Guillot, T., Hartogh, P., Hueso, R., Hofstadter, M., Lebreton, J. -P., Mandt, K. E., Rauer, H., Rannou, P., Renard, J. -B., Sánchez-Lavega, A., Sayanagi, K. M., Simon, A. A., Spilker, T., Venkatapathy, E., Waite, J. H., Wurz, P., 2022. In Situ exploration of the giant planets. *Experimental Astronomy* **54**, no. 2–3, pp. 975–1013. doi:10.1007/s10686-021-09775-z.
153. Mitri, G., Barnes, J., **Coustenis, A.**, Flamini, E., Hayes, A., Lorenz, R. D., Mastrogiuseppe, M., Orosei, R., Postberg, F., Reh, K., Soderblom, J. M., Sotin, C., Tobie, G., Tortora, P., Vuitton, V., Wurz, P., 2021. Exploration of Enceladus and Titan: Investigating Ocean Worlds' Evolution and Habitability in the Saturn System. *Exp. Astronomy* **54**, Issue 2-3, p.877-910. DOI: [10.1007/s10686-021-09772-2](https://doi.org/10.1007/s10686-021-09772-2)
154. Olsson-Francis, K., Doran, P., Ilyin, V., Raulin, F., Rettberg, P., Kminek, G., Zorzano Mier, M. P., **Coustenis, A.**, Hedman, N., Al Shehhi, O., Ammannito, E., Bernardini, J. N., Fujimoto, M., Grasset, O., Groen, F., Hayes, A., Gallagher, S., Kumar, P., Mustin, C., Nakamura, A., Seasly, E., Suzuki, Y., Peng, J., Prieto Ballesteros, O., Sinibaldi, S., Xu, K., Zaitsev, M., 2023. The COSPAR Planetary Protection Policy for missions to Mars: ways forward based on current science and knowledge gaps. *Life Sciences in Space Research*, Vol. **36**, p. 27-35. <https://doi.org/10.1016/j.lssr.2022.12.001>
155. Zorzano Mier, M. P., Olsson-Francis, K., Doran, P., Rettberg, P., **Coustenis, A.**, Ilyin, V., Raulin, F., Kminek, G., Hedman, N., Al Shehhi, O., Ammannito, E., Bernardini, J., Fujimoto, M., Grasset, O., Groen, F., Hayes, A., Gallagher, S., Kumar, P., Mustin, C., Nakamura, A., Seasly, E., Suzuki, Y., Peng, J., Prieto Ballesteros, O., Sinibaldi, S., Xu, K., Zaitsev, M., 2023. The COSPAR Planetary Protection Requirements for Space Missions to Venus. *Life Sciences in Space Research*, Vol. **37**, 18–24. <https://doi.org/10.1016/j.lssr.2023.02.001>
156. Es-Sayeh, M., Rodriguez, S., Coutelier, M., Rannou, P., Bézard, B., Maltagliati, L., Cornet, T., Grieger, S.B., Karkoschka, E., Le Mouélic, S., Neish, C., Mackenzie, S., Solomonidou, A., Sotin, C., **Coustenis, A.**, 2023. Updated radiative transfer model for Titan in the near-infrared wavelength range: Validation on Huygens atmospheric and surface measurements and application to the VIMS/Cassini observations of the Dragonfly landing area. *Plan. Sci. J.* **4**, Issue 3, id.44, 27 pp. DOI: 10.3847/PSJ/acbd37
157. Solomonidou, A., Malaska, M.J., Lopes, R.M.C., **Coustenis, A.**, Schoenfeld, A.M., Schmitt, B., Birch, S.P.D., Le Gall, A., Lawrence, K.J., Matsoukas, C., Wall, S.D., Elachi, C., 2023. Detailed chemical composition analysis of the Soi crater region on Titan. *Icarus*, submitted.
158. **Coustenis, A.**, Hedman, N., Doran, P.T., Al Shehhi, O., Ammannito, E., Fujimoto, M., Grasset, O., Groen, F., Hayes, A., Ilyin, V., Kumar, P., Morisset, C-E., Mustin, C., Olsson-Francis, K., Peng, J., Prieto Ballesteros, O., Raulin, F., Rettberg, P., Sinibaldi, S., Suzuki, J., Xu, K., Zaitsev, M., 2023. Planetary Protection: an international concern and responsibility. Editor's Challenge in Planetary Science: the Future of Planetary Exploration and the Next Generation of Planetary Missions. *Frontiers in Astronomy and Space Sciences - section Planetary Science.*, submitted.
159. Fletcher, L. N., Cavalié, T., Grassi, D., et al., **Coustenis, A.**, Costa, M., 2023. Jupiter Science Enabled by ESA's Jupiter Icy Moons Explorer. *Space Sciences Rev.*, submitted.

### *Other publications with review*

1. **Coustenis, A.**, 1991. Titan's Atmosphere from Voyager Infrared Observations: Parallels and Differences with the Primitive Earth. *Bioastronomy The Exploration Broadens*, Proceedings of the Third International Symposium on Bioastronomy, Val Cenis, Savoie, France, 18-23 June 1990, edited by J. Heidmann and M.J. Klein. Springer-Verlag Berlin Heidelberg New York. *Lecture Notes in Physics* **390**, 179-189.
2. **Coustenis, A.**, 1992. Titan's thermal infrared spectrum: from Voyager to ISO and CASSINI observations. Dans "*Infrared Astronomy with ISO*", Encrenaz, Th. and M.F. Kessler Eds., Nova Science Publ., 197-218.
3. **Coustenis, A.**, Lellouch, E., Combes, M., Wittemberg, R., McKay, C. P., Maillard, J.-P., 1996. Titan's atmosphere and surface from infrared spectroscopy and imagery. In *Astronomical and Biochemical Origins and the Search for Life in the Universe*, C. B. Cosmovici, S. Bowyer, D. Werthimer Eds., 227-234.
4. **Coustenis, A.**, 1997. Titan's atmosphere and surface from IR spectroscopy and imagery. *Adv. Space Res.* **19**, 1288.
5. **Coustenis, A.**, Schneider, J., Wittemberg, R., Chassefière, E., Guillot, T., Greene, T., Penny, A., Bockelée-Morvan, D., Rauer, H., 1998. High-resolution spectroscopy of 51 Peg B: Search for atmospheric signatures. Proceedings de *Brown dwarfs and extrasolar planets*, Puerto de la Cruz, Tenerife, Espagne, 17-21 mars 1997, *ASP Conf. Series*, R. Rebolo, E. L. Martin and M. R. Zapatero-Osona Eds., **134**, 296-303.
6. **Coustenis, A.**, Gendron, E., Lai, O., Veran, J.-P., Woillez, J., Combes, M., Fusco, Th., Mugnier, L., 2000. First images of Titan at 1.3 micron with the adaptive optics PUEO system at the CFHT. In *Highlights of Astronomy*, ASP Conference Series, B. Bézard and J. C. Spencer, eds., Vol. **12**, 626-628.
7. **Coustenis, A.**, Encrenaz, Th., Lellouch, E., Salama, A., Müller, Th., Burgdorf, M. J., Schmitt, B., Feuchtgruber, H., Schulz, B. Ott, S., De Graauw, Th., Griffin, M. J., Kessler, M. F., 2002. Observations of planetary satellites with ISO. *Proceedings of the COSPAR meeting*, 16-23 juillet 2000, Varsovie, Pologne, *Adv. Space Res.*, **30**, 1971-1977.

8. **Coustenis, A.**, 2002. Titan as an exobiological environment. In “*The Evolving Sun and its Influence on Planetary Environments*”. *ASP Conference Proceedings*, Edited by Benjamin Montesinos, Alvaro Gimenez and Edward F. Guinan. San Francisco, Astronomical Society of the Pacific, 2002, **269**, p. 179.
9. **Moutou, C., Coustenis, A., Iro, N., Mayor, M., Queloz, D., Schneider, J.**, 2002. VLT Observations of HD209458b. In “*Scientific Frontiers in Research on Extrasolar Planets*”, Eds Deming and Seager.
10. **Fulchignoni, M., Ferri, F., Angrilli, F., Bar-Nun, A., Barucci, A., Bianchini, G., Borucki, W., Coradini, M., Coustenis, A., Falkner, P., Flamini, E., Grard, R., Hamelin, M., Harri, A.M., Leppelmeier, G. W., Lopez-Moreno, J. J., McDonnell, J. A. M., McKay, C. P., Neubauer, F. H., Pedersen, A., Picardi, G., Pirronello, V., Rodrigo, R., Schwingenschuh, K., Seiff, A., Svedhem, H., Vanzani, V., Zarnecki, J.**, 2002. The Characterisation of Titan's Atmospheric Physical Properties by the Huygens Atmospheric Structure Instrument (HASI). *Space Sci. Rev.* **104**, 395-431.
11. **Coustenis, A.**, 2004. Titan's atmosphere and surface from imaging and spectroscopy in the past decade. Proceedings of the ESA Conference « Titan : from discovery to encounter », ESA/ESTEC, Noordwijk, Hollande, 13-17 avril 2004, ESA-SP **1278**, 301-312.
12. **Coustenis, A.**, 2006. Titan and the Cassini-Huygens mission. Proceedings du Hellenic Astronomical Society Meeting, Kefallonia, Grèce, 8-10 Septembre 2005, In *Recent Advances In Astronomy And Astrophysics: 7th International Conference of the Hellenic Astronomical Society*. AIP Conference Proceedings, Volume 848, 23-40.
13. **Coustenis, A.**, 2007. What Cassini-Huygens has revealed about Titan. *Astronomy and Geophysics* **48**, 2.14-2.20.
14. **Bampasidis, G., Coustenis, A., Moussas, X.**, 2007. Titan: determination of the local tectonic field at the Titan lake observed from the Cassini flyby on February 22, 2007. Proceedings of the IPPW5 Workshop, Bordeaux, France, 25-29 June.
15. **Coustenis, A., Lunine, J., Lebreton, J.-P., Matson, D., Erd, Ch., Reh, K., Beauchamp, P., Lorenz, R., Waite, H., Sotin, Ch., Gurbits, L., Hirtzig, M.**, 2009. Ground-based support for the Titan Saturn System Mission. Proceedings of the Workshop on “*Future Ground Based Solar System Research: Synergies with Space Probes and Space Telescope*”, Portoferraio, Isola d'Elba, Septembre 8-12, 2008.
16. **Solomonidou, A., Coustenis, A., Bampasidis, G., Kyriakopoulos, K., Moussas, X.**, 2010. Potentially active regions on Titan: Promising landing sites. Proceedings of the *International Planetary Probe Workshop 2010 (IPPW-7)*, Barcelona, Spain, 14-18 Juin, proceedings.
17. **Grasset, O., Coustenis, A., Durham, W. B., Hussmann, H., Pappalardo, R. T., Sasaki, S., Turrini, D.**, 2010. Preface. Satellites of the Outer Solar System: Exchange Processes Involving the Interior. In “*Moons of the Outer Solar System : exchange processes involving the interiors*”. O. Grasset, M. Blanc, A. Coustenis, W. Durham, H. Hussmann, R. Pappalardo, D. Turrini, Eds. ISSI Book series. *Space Sci. Rev.* **153**, 5-9.
18. **Coustenis, A.**, 2012. From the land of Greece to the lands of Titan. *Astrobiology* **12**, 170-174.
19. **Coustenis, A.**, 2015. Organic chemistry in planetary satellites of gas giants and implications for habitability. *Astronomy in Focus*, Piero Benvenuti, ed., XXIXth IAU General Assembly, Août 2015, Volume 1.
20. **Coustenis, A.**, 2015. Laboratory and theoretical work applied to planetary atmospheres. *Astronomy in Focus*, Piero Benvenuti, ed., XXIXth IAU General Assembly, Août 2015, Volume 1.
21. **Coustenis, A., Kminek, G., Hedman, N.**, 2019. The challenge of planetary protection. *ROOM Journal*, issue #2(20) Juin 2019, pp. 44-48. <https://room.eu.com/article/the-challenge-of-planetary-protection>.
22. **Coustenis, A., Kminek, G., Hedman, N., Ammanito, E., Deshevaya, E., Doran, P.T., Grasset, O., Green, J., Hayes, A., Lei, L., Nakamura, A., Prieto-Ballesteros, O., Raulin, F., Rettberg, P., Sreekumar, P., Tsuneta, S., Viso, M., Zaitsev, M., Zorzano-Mier, M.-P.**, 2019. The COSPAR Panel on Planetary Protection role, structure and activities. *Space Res. Today*, **205**, 14-26. <https://doi.org/10.1016/j.srt.2019.06.013>.
23. **Raulin, F., Coustenis, A., Kminek, G., Hedman, N.**, 2019. Preface to the special issue “Planetary protection: New aspects of policy and requirements”. *Life Sci. Space Res.* **23**, 1-2.
24. **Coustenis, A., Rodrigo, R., Spohn, T., L'Haridon, J.**, 2020. Editorial to the Topical Collection : Ocean Worlds. *Space Sci Rev.* **216**, Issue 4, article id.47. DOI: [10.1007/s11214-020-00672-z](https://doi.org/10.1007/s11214-020-00672-z)
25. **Coustenis, A.**, 2020. Titan's evolving atmosphere. *ROOM Journal*, June 2020, 76-81.
26. **Fisk, L., Worms, J.-C., Coustenis, A., Hedman, N., Kminek, G.**, 2020. Editorial to the Updated COSPAR Policy on Planetary Protection. *Space Research Today*, Elsevier, 08/2020, **208**, pp.9. (10.1016/j.srt.2020.07.008).
27. **COSPAR Panel on Planetary Protection**, 2020. COSPAR Policy on Planetary Protection. *Space Res. Today* **208**, Aug. 2020, pp. 10-22. <https://doi.org/10.1016/j.srt.2020.07.009>.
28. **Fisk, L., Worms, J.-C., Coustenis, A., Hedman, N., Kminek, G., Ammanito, E., Doran, P., Fujimoto, M., Grasset, O., Green, J., Hayes, A., Ilyin, V., Kumar, P., Nakamura, A., Olsson-Francis, K., Peng, J., Prieto Ballesteros, O., Raulin, F., Rettberg, P., Viso, M., Xu, K., Zaitsev, M., Zorzano Mier, M.-P.**, 2021. Introductory Note to the June 2021 and Update of the COSPAR Policy on Planetary Protection. *Space Research Today* **211**, Aug. 2021, 9-25, <https://doi.org/10.1016/j.srt.2021.07.009> and Policy : <https://doi.org/10.1016/j.srt.2021.07.010>
29. **Coustenis, A., Hedman, N., Doran, P.T., Al Shehhi, O., Ammannito, E., Fujimoto, M., Grasset, O., Groen, F., Hayes, A., Ilyin, V., Kumar, P., Morisset, C-E., Mustin, C., Olsson-Francis, K., Peng, J., Prieto Ballesteros, O., Raulin, F., Rettberg, P., Sinibaldi, S., Suzuki, J., Xu, K., Zaitsev, M.**, 2023. Planetary Protection: updates and challenges for a sustainable space exploration. *Acta Astronautica*, in press. <https://doi.org/10.1016/j.actaastro.2023.02.035>

## Books and chapters

1. **Coustenis, A., Lorenz, R.**, 1998. « Titan ». Chapitre dans *Encyclopedia of the Solar System*, P. R. Weissman, L.-A. McFadden, T.V. Johnson, Eds., Academic Press, 377-404.
2. **Coustenis, A., Taylor, F.**, 1999. *Titan, the Earth-like moon* (ouvrage). World Scientific Publishing, Singapore, Eds.
3. **Coustenis, A.**, 2000. « The satellites of Saturn ». Chapitre dans *The Encyclopedia of Astronomy and Astrophysics*, D. Emerson, Ed., Inst. of Phys. Publ., Angleterre.
4. **Coustenis, A.**, 2000. « Titan ». Chapitre dans *The Encyclopedia of Astronomy and Astrophysics*, D. Emerson, Ed., Inst. of Phys. Publ., Angleterre.
5. **Coustenis, A.**, 2005. “Titan”. Chapitre dans *Le Larousse du Ciel*, Ph. de la Cotardière et R. Ferlet, Eds.
6. **Biver, N., Coustenis, A., Dalouzy, J-C., Dawidowich, G., Dollfus, A., Ferrari, C., Fuentes, P., Gautier, D., Meeus, J., Oudenot, G., Prangée, R., Raulin, F., Slameh, M., Tobie, G.**, 2005. “Un siècle d’observations de Titan la mystérieuse”. Chapitre dans *Au plus près de Saturne*, Vuibert/SAF Eds.
7. **Coustenis, A.**, 2006. « Titan ». Chapitre dans *Encyclopedia of the Solar System*, Second Edition, P. R. Weissman, L.-A. McFadden, T.V. Johnson, Eds., Academic Press.
8. **Coustenis, A., Taylor, F.**, 2008. *Titan : Exploring an Earth-like World* (ouvrage). World Scientific Publishing, Singapore, Eds.
9. **Coustenis, A., Lellouch, E., Sicardy, B., Roe, H.**, 2010. “Earth-based perspective and pre-Cassini-Huygens knowledge of Titan”. Chapitre dans *Titan from Cassini-Huygens*, Brown, R. H., Lebreton, J.-P., Waite, H., Eds., Springer Verlag (Dordrecht), pp. 9-34.
10. **Dougherty, M., Coustenis, A., Lorenz, R.**, 2010. “Titan beyond Cassini-Huygens”. Chapitre dans *Titan from Cassini-Huygens*, Brown, R. H., Lebreton, J.-P., Waite, H., Eds., Springer-Verlag, New York, 535 pages, pp. 479-488, ISBN-10: 1402092148.
11. **Coustenis, A., Encrenaz, Th.**, 2013. *Life beyond Earth: the search for habitable worlds in the Universe*. Cambridge Univ. Press (ouvrage). ISBN: 9781107026179.
12. **Coustenis, A.**, 2014. « Titan ». Chapitre dans *Encyclopedia of the Solar System*, Third Edition, T. Spohn, D. Breuer, & T. V. Johnson (Eds.), Elsevier (pp. 831–849), ISBN 9780124158450.
13. **Coustenis, A.**, 2015. “The Cassini-Huygens mission”. Chapitre dans *the Encyclopedia of Astrobiology*, 2<sup>nd</sup> edition, M. Gargaud, R. Amils, J. Cernicharo, H. J. Cleaves II, K. Kobayashi, D. Pinti, M. Viso (Eds), Springer, 2550 p., pp. 383-397. ISBN 978-3-662-44184-8.
14. **Encrenaz, Th., Coustenis, A.**, 2017. “Composition and Chemistry of the Atmospheres of Terrestrial Planets: Venus, the Earth, Mars, and Titan”. Chapitre dans *Handbook of Exoplanets*. H. J. Deeg and J. A. Belmonte, Eds. Springer, 1-28. doi:10.1007/978-3-319-30648-3\_45-1.
15. **Coustenis, A., Taylor, F.W., Plainaki, Ch.**, 2018. “Climate issues from the planetary perspective and insights for the Earth”. Chapitre dans *Global Change and Future Earth: The Geoscience Perspective*. T. Beer, J. Li, K. Alverson, eds, Cambridge Univ. press, <https://doi.org/10.1017/9781316761489>, ISBN: 9781316761489, pp. 40-57.
16. **Lunine, J., Coustenis, A., Mitri, G., Tobie, G. Tosi, F.**, 2018. “Future exploration of Enceladus and other Saturnian moons”. Chapitre dans “Enceladus and the Icy Moons of Saturn”. LPI/UA/Space Science Series, Paul M. Schenk, Roger N. Clark, Carly J. A. Howett, Anne J. Verbiscer, J. Hunter Waite Eds., ISBN 9780816537075.
17. **Coustenis, A.**, 2019. « La mission Cassini-Huygens ». Chapitre dans l’édition 2019 d’Universalia (Encyclopédie Universalis).
18. **Coustenis, A., Raulin, F.**, 2019. “Titan”. Chapitre dans *the Encyclopedia of Astrobiology*, 2<sup>nd</sup> edition, M. Gargaud, R. Amils, J. Cernicharo, H. J. Cleaves II, K. Kobayashi, D. Pinti, M. Viso (Eds), Springer, 2550 p., pp. 2506-2523. ISBN 978-3-662-44184-8.
19. **Coustenis, A., Fulchignoni, M., Roques, F.**, 2021. « Les satellites et les anneaux des planètes géantes ». Chapitre dans l’ouvrage « Le Système solaire : Origine et Evolution », Th. Encrenaz, Ed., ISTE Science Publ. 10.51926/ISTE.9034.ch1
20. **Coustenis, A.**, 2021. “The Atmosphere of Titan”. In Read, P. (Ed.), *Oxford Research Encyclopedia of Planetary Science*. Oxford University Press (August 31). doi: <https://doi.org/10.1093/acrefore/9780190647926.013.120>
21. **Coustenis, A., Witasse, O., Erd, C.**, 2021. The JUICE mission: expectations and challenges. *Fall issue of The Bridge on space exploration*, Sept. 2021, Vol. 51, issue #3, pp. 41-50. <https://www.nae.edu/260902/The-JUICE-Mission-Challenges-and-Expectations>
22. **Solomonidou, A., Le Gall, A., Hayne, P., Coustenis, A.**, 2023. « Titan surface composition ». Chapitre dans “Titan After Cassini Huygens”, R. Lopes, C. Elachi, I. Mueller-Wodarg, and A. Solomonidou, (eds.) COSPAR Books series, in press.