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Education

PhD in Astronomy and Astrophysics, University of Bordeaux (France)	2017
MSc in Astronomy and Astrophysics, Paris - Meudon Observatory (France)	2013
BSc in Physics, University of Rennes 1 (France)	2011

Employment

SETI postdoctoral fellow, NASA Ames/SETI Institute, CA,	Since Feb. 2020
NASA postdoctoral program fellow, NASA Ames, CA,	2017-2020

Publications

1. W.M. Grundy, M.K. Bird, D.T. Britt, J.C. Cook, D.P. Cruikshank, C.J.A. Howett, S. Krijt, I.R. Linscott, C.B. Olkin, A.H. Parker, S. Protopapa, **M. Ruaud**, O.M. Umurhan, L.A. Young, C.M. Dalle Ore, J.J. Kavelaars, J.T. Keane, Y.J. Pendleton, S.B. Porter, F. Scipioni, J.R. Spencer, S.A. Stern, A.J. Verbiscer, H.A. Weaver, R.P. Binzel, M.W. Buie, B.J. Buratti, A. Cheng, A.M. Earle, H.A. Elliott, L. Gabasova, G.R. Gladstone, M.E. Hill, M. Horanyi, D.E. Jennings, A.W. Lunsford, D.J. McComas, W.B. McKinnon, R.L. McNutt Jr., J.M. Moore, J.W. Parker, E. Quirico, D.C. Reuter, P.M. Schenk, B. Schmitt, M.R. Showalter, K.N. Singer, G.E. Weigle, A.M. Zangari. *Color, Composition, and Thermal Environment of Kuiper Belt Object (486958) 2014 MU₆₉*. *Science*, 2020, 367, 6481.
2. **Ruaud, M.** and Gorti, U. *A three-phase approach to grain surface chemistry in protoplanetary disks: Gas, ice surfaces and ice mantles of dust grains*. *ApJ*, 2019, 885, 146.
3. Wakelam, V., **Ruaud, M.**, Gratier, P. Bonnell, I. A. *Influence of galactic arm scale dynamics on the molecular composition of the cold and dense ISM - II. Molecular oxygen abundance*. *MNRAS*, 2018, 473, 59–63.
4. Majumdar, L., Loison, J.-C., **Ruaud, M.**, Gratier, P., Wakelam, V., Coutens, A. *Methyl isocyanate (CH₃NCO): an important missing organic in current astrochemical networks*. *MNRAS*, 2018, 473, 59–63.
5. **Ruaud, M.**, Wakelam, V., Gratier, P. and Bonnell, I.A. *Influence of galactic arm scale dynamics on the molecular composition of the cold and dense ISM - I. Observed abundance gradients in dense clouds*. *A&A*, 2018, 611, A96.
6. Le Gal, R., Herbst, E., Dufour, G., Gratier, P., **Ruaud, M.**, and Wakelam, V. *A new study of the chemical structure of the Horsehead nebula: the influence of grain-surface chemistry*. *A&A*, 2017, 605, A88.
7. Wakelam, V., Loison, J.-C., Mereau, R., and **Ruaud, M.** *Binding energies: new values and impact on the efficiency of chemical desorption*. *Molecular Astrophysics*, 2017, 6, 22–35.

8. Vidal, T., Loison, J.C., Jaziri, A.Y., **Ruaud, M.**, Gratier, P., Wakelam, V. *On the reservoir of sulphur in dark clouds: chemistry and elemental abundance reconciled.* MNRAS, 2017, 469, 435–447.
9. Majumdar, L., Gratier, P., **Ruaud, M.**, Wakelam, V., Vastel, C., Sipilä, O., Hersant, F., Dutrey, A., Guilloteau, S. *Chemistry of TMC-1 with multiply deuterated species and spin chemistry of H_2 , H_2^+ , H_3^+ and their isotopologues.* MNRAS, 2016, 466, 4470–4479.
10. Wakelam, V., **Ruaud, M.**, Hersant, F., Dutrey, A., Semenov, D., Majumdar, L., Guilloteau, S. *On the importance of the H_2 abundance in protoplanetary disk ices for the molecular layer chemical composition.* A&A, 2016, 594, A35.
11. **Ruaud, M.**, Wakelam, V. and Hersant, F. *Gas and grain chemical composition in cold cores as predicted by the Nautilus three-phase model.* MNRAS, 2016, 459, 3756–3767.
12. Le Petit, F., **Ruaud, M.**, Bron, E., Godard, B., Roueff, E., Languignon, D., and Le Bourlot, J. *Physical conditions in the Central Molecular Zone inferred by H_3^+ .* A&A, 2016, 585, A105.
13. Wakelam, V., Loison, J.-C., Hickson, K. M., and **Ruaud, M.** *A proposed chemical scheme for HCCO formation in cold dense clouds.* MNRAS, 2015, 453, L48–L52.
14. **Ruaud, M.**, Loison, J. C., Hickson, K. M., Gratier, P., Hersant, F., Wakelam, V. *Modelling complex organic molecules in dense regions : Eley-Rideal and complex induced reaction.* MNRAS, 2015, 447, 4004–4017.
15. Wakelam, V., Loison, J.-C., Herbst, E., Pavone, B., Bergeat, A., Béroff, K., Chabot, M., Faure, A., Galli, D., Geppert, W. D., Gerlich, D., Gratier, P., Harada, N., Hickson, K. M., Honvault, P., Klippenstein, S. J., Le Picard, S. D., Nyman, G., **Ruaud, M.**, Schlemmer, S., Sims, I. R., Talbi, D., Tennyson, J., and Wester, R. *The 2014 KIDA Network for Interstellar Chemistry.* ApJS, 2015, 217, 20.
16. Gerin, M., **Ruaud, M.**, Goicoechea, J. R., Gusdorf, A., Godard, B., de Luca, M., Falgarone, E., Goldsmith, P., Lis, D. C., Menten, K. M., Neufeld, D., Phillips, T. G., and Liszt, H. *[C II] absorption and emission in the diffuse interstellar medium across the Galactic plane.* A&A, 2015, 573, A30.