

# Gergö Popping

## Curriculum Vitae

European Southern Observatory  
Karl-Schwarzschild-Strasse 2  
85748 Garching  
Germany

gpopping@eso.org  
+49 89 3200 6247

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### Professional Employment

2019 - present	<b>European Southern Observatory, Garching, Germany</b> Astronomer in the EU ALMA Regional Center)
2017 - 2019	<b>Max-Planck-Institut für Astronomie, Heidelberg, Germany</b> Research Fellow (100% independent research)
2014 - 2017	<b>European Southern Observatory, Garching, Germany</b> ESO Fellow (75% independent research, 25% functional duties in the ALMA Regional Centre)

### Education

2010 - 2014	<b>PhD in Astrophysics, University of Groningen, The Netherlands</b> <i>Cum Laude</i> , Supervisors: dr. S.C. Trager, dr. M. Spaans, dr. R.S. Somerville <i>The evolution of the atomic and molecular interstellar medium in star-forming galaxies</i> , developing semi-analytic and semi-empirical models for the atomic and molecular gas content and sub-mm emission of galaxies
2009 - 2010	<b>Msc. in Astronomy, University of Groningen, The Netherlands</b> Masters research project, ' <i>A complete picture of star-formation along the strong NGC 2903 bar</i> ', Ssupervisors: dr. I. Pérez, prof. dr. J.M. van der Hulst, dr. A. Zurita, working with broad-band and H $\alpha$ photometry as well as HI inteferometry data)
2005 - 2009	<b>Bsc. in Astronomy, University of Groningen, The Netherlands</b> Bachelor research project, ' <i>Star formation in the bar of NGC 2903</i> ', (Supervisors: dr. I. Pérez, dr. A. Zurita, prof. dr. R.F. Peletier, working with broad-band and H $\alpha$ photometry)

### Research Interest

Galaxy formation and evolution. Gas, dust, and metals in galaxies. ISM conditions of galaxies. Sub-mm interferometry. Galaxy formation modeling. Sub-mm emission line modeling. Dust absorption/re-emission and radiative transfer modeling. Semi-analytic and hydrodynamical modeling. Star formation and the stellar buildup of galaxies accross cosmic time.

### Observational experience

2012 - 2015	PI of ALMA cycle 3: 2015.1.00228.S and ALMA cycle 1: 2012.1.00323.S
2015-2017	4 shifts as Astronomer on Duty at the ALMA observatory
2007 - 2009	Observing run Isaac Newton Telescope, La Palma, total of 9 nights
2012 - present	CO-I on numerous VLT, PdBI/NOEMA, NOAO, JVLA, and ALMA proposals

## Observatory work

2015 - 2017	Quality assurance level 2 (QA2) for ALMA data at ESO. Calibrated and reduced over 50 ALMA projects (12m, ACA, total power)
2017	Helpdesk support ALMA in the European ARC
2015 - 2017	Contact scientist for ALMA cycle 3 and 4 projects
2015 - 2017	Participation in software testing (e.g., SnooPI) and contribution to various ALMA user documents,
2014-2016	Technical secretary ESO OPC 95, 97, and 99

## Service

2014 - Present	Referee for MNRAS, AAS (ApJ, ApJL, ApJS), and A&A
2015 - 2017	Fellow representative at ESO, Garching
2017	Member IMPRS Heidelberg PhD program selection committee
2012 - 2013	Graduate student representative of Astronomy, University of Groningen, The Netherlands
2007 - 2009	Undergraduate student representative of Astronomy, University of Groningen, The Netherlands

## Managerial Experience

2019	Conflict Management course (through ESO)
2015	Project Management course (through ESO)
Jan 2019 - Present	Organizer 3-day MPIA galaxy & cosmology department retreat 2019
April 2015 - Present	SOC member of 'Views on the Interstellar Medium in galaxies in the ALMA era' (Bologna Sept. 2019), SOC member of: 'EWASS 2018:The interstellar medium as a window onto galaxy evolution', SOC member ESO workshop: 'The galactic ecosystem. Flow of baryons through galaxies. (July 2017)'
2016 - 2017	Co-organizer Informal discussion at ESO
2015 - 2017	Co-organizer 'gas matters' club at ESO, MPA, MPE
2014 - 2015	Co-organizer Galaxy coffee, an ESO, MPA, MPE galaxy discussion group

## Large Collaborations

	Co-developer of the Santa-Cruz semi-analytic model
	Theory lead and CO-I of the ALMA Spectroscopic Survey (ASPECS)
	CO-I of STARFIRE (The Spectroscopic Terahertz Airborne Receiver for Far-InfraRed Exploration), CII intensity mapping balloon experiment
	CO-I of Looking at the Distant Universe with the MeerKAT Array (LADUMA)
	CO-I of MeerKAT International GigaHertz Tiered Extragalactic Exploration Survey -HI (MIGHTEE-HI)

## Mentoring

2018 - present	Masters project supervision, Sebastian Schulz, University of Heidelberg
2014 - 2017	Fellow mentor at ESO of Anne Klitsch, Darshan Kakkad, Nicolas Guillard, Kate Pitchford
2013 - 2015	Masters project supervision, Judith ter Horst, University of Groningen

## Honours and Awards

2017	MPIA Galaxy and Cosmology fellowship
2015	<i>van Swinderen prize</i> for best 2014 thesis and thesis presentation in the faculty of medicine and sciences at the University of Groningen
2014	ESO fellowship
2010 - 2014	Awarded over 2000 Euro's by the Leids Kerkhoven Bosscha Fonds to attend international conferences

## Teaching experience

2013	Teaching Assistant Statistics (second year bachelor), Groningen
2012	Teaching Assistant Introduction Practical Astronomy, (second year bachelor), Groningen
2010	Teaching Assistant Galaxies (second year bachelor), Groningen
2009	Teaching assistant Observational Techniques, including assisting observational run at the Isaac Newton Telescope, La Palma, Groningen
2007	Teaching assistant Integrerend Project (first year bachelor), Groningen
2006- 2009	Practical assignment assistant Mechanics, Groningen

## Recent Talks and Seminars

### *Invited:*

February 2019	<i>Invited talk:</i> Line Intensity Mapping Workshop at the CCA, New York, US
January 2019	<i>Invited talk:</i> The growth of galaxies in the early Universe V, Sesto, Italy
March 2018	<i>Invited talk:</i> Walking the line 2018, Phoenix, Arizona, US
October 2016	<i>Invited colloquium:</i> INAF Firenze, Italy
August 2016	<i>Invited talk:</i> Many pathways towards galaxy transformations Catalina Island, US
June 2016	<i>Invited colloquium:</i> INAF Bologna, Italy
April 2016	<i>Invited talk:</i> Xgal 2016, Charlottesville, US
December 2015	<i>Invited colloquium:</i> AIFA & MPIfR Bonn, Germany
June 2015	<i>Invited talk:</i> Pathways to galaxy formation, Prato, Italy
November 2013	<i>Invited colloquium:</i> University of Western Cape, Cape Town, South Afrika
October 2013	<i>Invited colloquium,</i> Rutgers University, New

### *Contributed talks:*

March 2019	Contributed talk: 'Dusting the Universe', Tucson, Arizona, US
November 2018	Contributed talk: 'PanModel2018 : Challenges in Panchromatic Galaxy Modelling with Next Generation Facilities', Osaka, Japan
April 2018	MIAPP workshop 'The interstellar medium of high redshift galaxies', Garching, Germany
March 2018	Colloquium, Universtity of Florida, Gainesville, Florida, US
March 2018	Königstuhl Colloquium, MPIA, Heidelberg, Germany
December 2017	Contributed talk: 'Distant galaxies from the far south', Bariloche, Argentina
July 2017	MIAPP workshop 'In and out, what rules the galaxy baryon cycle?', Garching, Germany
April 2017	Contributed talk: Lifecycle of metals throughout the Universe, STScI, Baltimore, US

April 2017	Colloquium, Cardiff University, UK
March 2017	Kapteyn Institute Seminar, Groningen, Netherlands
January 2017	MPA Institute Seminar, Garching, Germany
December 2016	ESO, 'gas-matters' talk, Garching, Germany
November 2016	Colloquium: Universitäts-Sternwarte München, Germany
September 2016	Contributed talk: Multiple faces of interstellar dust, Garching, Germany
June 2016	Contributed talk: Disc galaxies in the Universe, ESO Garching, Germany
September 2015	Thirty minute talk: ESO Santiago, Chile
May 2015	Contributed talk: Gas, dust and star-formation in the Universe; Chania, Greece
March 2015	FIR group meeting: MPE Garching, Germany
January 2015	Theory talk: MPIA Heidelberg, Germany
December 2015	Contributed talk: ALMA postdoc workshop, Tokyo, Japan
November 2015	Colloquium: University of Groningen, The Netherlands
August 2014	Contributed talk: Transformational science in the ALMA era, Charlottesville, US
April 2014	Contributed talk: Formation and growth of galaxies in the young Universe: Obergurgl, Austria
March 2014	Contributed talk: 7th PHISCC meeting: Dwingeloo, The Netherlands
November 2013	Contributed talk: The emergence of disk galaxies: Western Cape, South Afrika

## Outreach

2017	Astronomy for non astronomers at ESO
2016	Volunteer 'Girls day at ESO'
2009 - 2014	Volunteer at Blaauw Observatory, Groningen
2008 - 2009	Assistent outreach activities 'Academische jaarprijs 2008', Groningen

## Skills

Operating System	Advanced knowledge of MAC OS, Microsoft Windows, Linux (Red Hat Enterprise 3 and 4, Ubuntu, KDE, Gnome, tcsh)
Software/Computer Languages	Expert knowledge of Python Advanced knowledge of C++, Fortran95, git version control Advanced knowledge of CASA Advanced knowledge of Tensorflow, Keras, scikit-learn, SQL Moderately advanced knowlegde of IRAF, GIPSY, IDL, Mathematica, Experience with HTML, JavaScript
Languages	Dutch: native language English: fluent German: advanced Hungarian: advanced

## Publications

All publications noted with <sup>[OA]</sup> are publically available.

First author papers:

1. The ALMA Spectroscopic Survey in the HUDF: the molecular gas content of galaxies and tensions with IllustrisTNG and the Santa Cruz SAM, **Gergő Popping**, Annalisa Pillepich, Rachel Somerville, Roberto Decarli, Fabian Walter, Manuel Aravena, et al., 2019b, ApJ, 882, 137P<sup>[OA]</sup>
2. The art of modelling CO, [C I], and [C II] in cosmological galaxy formation models, **G. Popping**, D. Narayanan, R. S. Somerville, A. L. Faisst, M. R. Krumholz, MNRAS, 2019a, 483, 4906P<sup>[OA]</sup>
3. Dissecting the IRX- $\beta$  dust attenuation relation: exploring the physical origin of observed variations in galaxies, **G. Popping**, A. Puglisi, C. A. Norman, MNRAS, 2017c, 472, 2315<sup>[OA]</sup>
4. The dust content of galaxies from  $z = 0$  to  $z = 9$ , **G. Popping**, R.S. Somerville, M. Galametz, MNRAS, 2017b, 471, 3152<sup>[OA]</sup>
5. ALMA reveals starburst-like interstellar medium conditions in a compact star-forming galaxy at  $z \sim 2$  using [CI] and CO, **G. Popping**, R. Decarli, A. W. S. Man, E. J. Nelson, M. Béthermin, C. De Breuck, V. Mainieri, P. G. van Dokkum, B. Gullberg, E. van Kampen, M. Spaans, S. C. Trager, A&A, 2017a, 602A, 11<sup>[OA]</sup>
6. Sub-mm emission line deep fields: CO and [C II] luminosity functions out to  $z = 6$ , **G. Popping**, E. van Kampen, R. Decarli, M. Spaans, R.S. Somerville, S.C. Trager, MNRAS, 2016, 461, 93P<sup>[OA]</sup>
7. The inferred evolution of the cold gas properties of CANDELS galaxies at  $0.5 < z < 3.0$ , **G. Popping**, K.I. Caputi, S.C. Trager, R.S. Somerville, A. Dekel, S.A. Kassin, D.D. Kocevski, A.M. Koekemoer, S.M. Faber, H.C. Ferguson, A. Galametz, N.A. Grogin, Y. Guo, Y. Lu, A. van der Wel, B.J. Weiner, MNRAS, 2015b, 454, 2258P<sup>[OA]</sup>
8. Evolution of the atomic and molecular gas content of galaxies in dark matter haloes, **G. Popping**, P.S. Behroozi, M.S. Peeples, MNRAS, 2015, 449P<sup>[OA]</sup>
9. The nature of the ISM in galaxies during the star-formation activity peak of the Universe, **G. Popping**, J.P. Pérez-Beaupuits, M. Spaans, S.C. Trager, R.S. Somerville, MNRAS, 2014b, 444, 1301P<sup>[OA]</sup>
10. Evolution of the atomic and molecular gas content of galaxies, **G. Popping**, R.S. Somerville, S.C. Trager, MNRAS, 2014, 442, 2398P<sup>[OA]</sup>
11. An indirect measurement of gas evolution in galaxies at  $0.5 < z < 2.0$ , **G. Popping**, K.I. Caputi, R.S. Somerville, S.C. Trager, MNRAS, 2012, 425, 2386P<sup>[OA]</sup>
12. Multiwavelength study of the star formation in the bar of NGC 2903, **G. Popping**, I. Pérez, A. Zurita, A&A, 2010, 512, 8P<sup>[OA]</sup>

Co-author papers:

13. ALMACAL VI: Molecular gas mass density across cosmic time via a blind search for intervening molecular absorbers, Klitsch, Anne; Péroux, Céline; Zwaan, Martin A.; Smail, Ian; Nelson, Dylan; **Popping, Gergö**; Chen, Chian-Chou; Diemer, Benedikt; Ivison, R. J.; Allison, James R.; Muller, Sébastien; Swinbank, A. Mark; Hamanowicz, Aleksandra; Biggs, Andrew D.; Dutta, Rajeshwari, 2019, MNRAS, tmp.2286K
14. Gonzalez-Lopez, Jorge; Decarli, Roberto; Pavesi, Riccardo; Walter, Fabian; Aravena, Manuel; Carilli, Chris; Boogaard, Leindert; **Popping, Gergö**, et al., 2019, ApJ, 882, 139G
15. The ALMA Spectroscopic Survey in the HUDF: CO Luminosity Functions and the Molecular Gas Content of Galaxies through Cosmic History, Decarli, Roberto; Walter, Fabian; Gonzalez-Lopez, Jorge; Aravena, Manuel; Boogaard, Leindert; Carilli, Chris; Cox, Pierre; Daddi, Emanuele; **Popping, Gergö**, et al., 2019, ApJ, 882, 138D
16. The ALMA Spectroscopic Survey in the Hubble Ultra Deep Field: Evolution of the Molecular Gas in CO-selected Galaxies, Aravena, Manuel; Decarli, Roberto; Gonzalez-Lopez, Jorge; Boogaard, Leindert; Walter, Fabian; Carilli, Chris; **Popping, Gergö**; et al., 2019, ApJ, 882, 136A
17. The ALMA Spectroscopic Survey in the HUDF: Nature and Physical Properties of Gas-mass Selected Galaxies Using MUSE Spectroscopy, Boogaard, Leindert A.; Decarli, Roberto;...; **Popping, Gergö**, et al., 2019, ApJ, 882, 140B
18. The Molecular Gas Reservoirs of  $z \sim 2$  Galaxies: A Comparison of CO(1-0) and Dust-based Molecular Gas Masses, Kaasinen, M.; Scoville, N.; Walter, F.; Da Cunha, E.; **Popping, G.**; Pavesi, R.; Darvish, B.; Casey, C. M.; Riechers, D. A.; Glover, S., 2019, ApJ, 880, 15K<sup>[OA]</sup>
19. Semi-analytic forecasts for JWST - II. physical properties and scaling relations for galaxies at  $z = 4-10$ , Yung, L. Y. Aaron; Somerville, Rachel S.; **Popping, Gergö**; Finkelstein, Steven L.; Ferguson, Harry C.; Dav'e, Romeel, 2019, MNRAS, 483, 2983Y<sup>[OA]</sup>
20. ALMACAL V: absorption-selected galaxies with evidence for excited ISMs, Klitsch, A.; Zwaan, M. A.; Péroux, C.; Smail, I.; Oteo, I.; **Popping, G.**; Swinbank, A. M.; Ivison, R. J.; Biggs, A. D., MNRAS, 2019, 482L, 65K<sup>[OA]</sup>
21. Semi-analytic forecasts for JWST - I. UV luminosity functions at  $z = 4 - 10$ , L. Y. Aaron Yung; R. S. Somerville, S. L. Finkelstein, **G. Popping**, R. Davé, 2019, MNRAS. 483, 2983Y<sup>[OA]</sup>
22. A Theory for the Variation of Dust Attenuation Laws in Galaxies, Narayanan, Desika; Conroy, Charlie; Davé, Romeel; Johnson, Benjamin D.; **Popping, Gergö**, ApJ,2018, 869, 70N<sup>[OA]</sup>
23. Modeling the Atomic-to-molecular Transition in Cosmological Simulations of Galaxy Formation, Diemer, Benedikt; Stevens, Adam R. H.; Forbes, John C.; Marinacci, Federico; Hernquist, Lars; Lagos, Claudia del P.; Sternberg, Amiel; Pillepich, Annalisa; Nelson, Dylan; **Popping, Gergö**; Villaescusa-Navarro, Francisco; Torrey, Paul; Vogelsberger, Mark, ApJS, 2018, 238, 33D<sup>[OA]</sup>
24. Challenges and Techniques for Simulating Line Emission, Olsen, Karen; Pallottini, Andrea; Wofford, Aida; Chatzikos, Marios; Revalski, Mitchell; Guzmán, Francisco; **Popping, Gergö**; Vázquez-Semadeni, Enrique; Magdis, Georgios; Richardson, Mark; Hirschmann, Michaela; Gray, William, Galaxies, 2018, vol. 6, issue 4, p. 100<sup>[OA]</sup>

25. IQ-Collaboratory 1.1: the Star-Forming Sequence of Simulated Central Galaxies, Hahn, ChangHoon; Starkenburg, Tjitske K.; Choi, Ena; Davé, Romeel; Dickey, Claire M.; Geha, Marla C.; Genel, Shy; Hayward, Christopher C.; Maller, Ariyeh H.; Mandyam, Nityasri; Pandya, Viraj; **Popping, Gergö**; Rafieferantsoa, Mika; Somerville, Rachel S.; Tinker, Jeremy L., 2019, ApJ, 872, 160H<sup>[OA]</sup>
26. The [C II] emission as a molecular gas mass tracer in galaxies at low and high redshift, A. Zanella, E. Daddi, G. Magdis, T. Diaz Santos, D. Cormier, D. Liu, A. Cibinel, R. Gobat, M. Dickinson, M. Sargent, **G. Popping**, et al., MNRAS, 2018, 481. 1976Z<sup>[OA]</sup>
27. ALMACAL - III. A combined ALMA and MUSE survey for neutral, molecular, and ionized gas in an HI-absorption-selected system, A. Klitsch, C. Péroux, M. A. Zwaan, I. Smail, I. Oteo, A. D. Biggs, **G. Popping**, A. M. Swinbank, 2018, MNRAS, 475, 492<sup>[OA]</sup>
28. Hierarchical Bayesian inference of the initial mass function in composite stellar populations, M. Dries, S. C. Trager, L. V. E. Koopmans, **G. Popping**, R. S. Somerville, 2018, MNRAS, 474, 3500<sup>[OA]</sup>
29. Science with an ngVLA: Imaging Cold Gas to 1 kpc Scales in High-Redshift Galaxies with the ngVLA, Casey, Caitlin M.; Narayanan, Desika; Carilli, Chris; Champagne, Jaclyn; Hung, Chao-Ling; Dave, Romeel; Decarli, Roberto; Murphy, Eric J.; **Popping, Gergö**; Riechers, Dominik; Somerville, Rachel S.; Walter, Fabian, Science with a Next-Generation VLA, ed. E. J. Murphy (ASP, San Francisco, CA)<sup>[OA]</sup>
30. GAMA/H-ATLAS: The Local Dust Mass Function and Cosmic Density as a Function of Galaxy Type - A Benchmark for Models of Galaxy Evolution, Beeston, R. A.; Wright, A. H.; Maddox, S.; Gomez, H. L.; Dunne, L.; Driver, S. P., et al. including **G. Popping**, MNRAS, 2018, 479, 1077B<sup>[OA]</sup>
31. Line-Intensity Mapping: 2017 Status Report, Kovetz, Ely D.; Viero, Marco P., et al. including **G. Popping**, 2017, ArXiv:1709.09066<sup>[OA]</sup>
32. The Constant Average Relationship between Dust-obscured Star Formation and Stellar Mass from  $z=0$  to  $z=2.50$ , K.E. Whitaker, A. Pope, R. Cybulski, C. Casey, **G. Popping**, M.S. Yun, 2017, ApJ, 850, 220<sup>[OA]</sup>
33. ALMA Spectroscopic Survey in the Hubble Ultra Deep Field: implications for spectral line intensity mapping at millimeter wavelengths and CMB spectral distortions, Carilli, C. L.; Chluba, J.; Decarli, R.; Walter, F.; Aravena, M.; Wagg, J.; **Popping, G.**; Cortes, P.; Hodge, J.; Weiss, A.; Bertoldi, F.; Riechers, D., 2016, ApJ, 833, 73<sup>[OA]</sup>
34. ALMA Spectroscopic Survey in the Hubble Ultra Deep Field: Search for [CII] line and dust emission in  $6 < z < 8$  galaxies, Aravena, M.; Decarli, R.; Walter, F.; Bouwens, R.; Oesch, P. A.; Carilli, C. L.; Bauer, F. E.; Da Cunha, E.; Daddi, E.; Gonzalez-Lopez, J.; Ivison, R. J.; Riechers, D. A.; Smail, Ian; Swinbank, A. M.; Weiss, A.; Anguita, T.; Bacon, R.; Bell, E.; Bertoldi, F.; Cortes, P.; Cox, P.; Hodge, J.; Ibar, E.; Inami, H.; Infante, L.; Karim, A.; Magnelli, B.; Ota, K.; **Popping, G.**; van der Werf, P.; Wagg, J.; Fudamoto, Y., 2016, ApJ, 833, 71<sup>[OA]</sup>
35. ALMA Spectroscopic Survey in the Hubble Ultra Deep Field: Molecular gas reservoirs in high-redshift galaxies, Decarli, Roberto; Walter, Fabian; Aravena, Manuel; Carilli, Chris;

- Bouwens, Rychard; da Cunha, Elisabete; Daddi, Emanuele; Elbaz, David; Riechers, Dominik; Smail, Ian; Swinbank, Mark; Weiss, Axel; Bacon, Roland; Bauer, Franz; Bell, Eric F.; Bertoldi, Frank; Chapman, Scott; Colina, Luis; Cortes, Paulo C.; Cox, Pierre; Gonzalez-Lopez, Jorge; Inami, Hanae; Ivison, Rob; Hodge, Jacqueline; Karim, Alex; Magnelli, Benjamin; Ota, Kazuaki; **Popping, Gergö**; Rix, Hans-Walter; Sargent, Mark; van der Wel, Arjen; van der Werf, Paul, 2016, ApJ, 833, 70<sup>[OA]</sup>
36. ALMA spectroscopic survey in the Hubble Ultra Deep Field: CO luminosity functions and the evolution of the cosmic density of molecular gas, Decarli, Roberto; Walter, Fabian; Aravena, Manuel; Carilli, Chris; Bouwens, Rychard; da Cunha, Elisabete; Daddi, Emanuele; Ivison, R. J.; **Popping, Gergö**; Riechers, Dominik; Smail, Ian; Swinbank, Mark; Weiss, Axel; Anguita, Timo; Assef, Roberto; Bauer, Franz; Bell, Eric F.; Bertoldi, Frank; Chapman, Scott; Colina, Luis; Cortes, Paulo C.; Cox, Pierre; Dickinson, Mark; Elbaz, David; Gonzalez-Lopez, Jorge; Ibar, Edo; Infante, Leopoldo; Hodge, Jacqueline; Karim, Alex; Le Fevre, Olivier; Magnelli, Benjamin; Neri, Roberto; Oesch, Pascal; Ota, Kazuaki; Rix, Hans-Walter; Sargent, Mark; Sheth, Kartik; van der Wel, Arjen; van der Werf, Paul; Wagg, Jeff, 2016, ApJ, 833, 69<sup>[OA]</sup>
  37. ALMA spectroscopic survey in the Hubble Ultra Deep Field: Continuum number counts, resolved 1.2-mm extragalactic background, and properties of the faintest dusty star forming galaxies, Aravena, Manuel; Decarli, Roberto; Walter, Fabian; Da Cunha, Elisabete; Bauer, Franz E.; Carilli, Christopher; Daddi, Emanuele; Elbaz, David; Ivison, R. J.; Riechers, Dominik; Smail, Ian R.; Swinbank, Mark; Weiss, Axel; Anguita, Timo; Assef, Roberto J.; Bell, Eric; Bertoldi, Frank; Bacon, Roland; Bouwens, Rychard; Cortes, Paulo; Cox, Pierre; Gonzalez-Lopez, Jorge; Hodge, Jacqueline; Ibar, Eduardo; Inami, Hanae; Infante, Leopoldo; Karim, Alexander; Le Fevre, Olivier; Magnelli, Benjamin; Ota, Kazuaki; **Popping, Gergö**; Sheth, Kartik; van der Werf, Paul; Wagg, Jeffrey, 2016, ApJ, 833, 68<sup>[OA]</sup>
  38. ALMA Spectroscopic Survey in the Hubble Ultra Deep Field: Survey Description, Walter, Fabian; Decarli, Roberto; Aravena, Manuel; Carilli, Chris; Bouwens, Rychard; da Cunha, Elisabete; Daddi, Emanuele; Ivison, R. J.; Riechers, Dominik; Smail, Ian; Swinbank, Mark; Weiss, Axel; Anguita, Timo; Assef, Roberto; Bacon, Roland; Bauer, Franz; Bell, Eric F.; Bertoldi, Frank; Chapman, Scott; Colina, Luis; Cortes, Paulo C.; Cox, Pierre; Dickinson, Mark; Elbaz, David; Gonzalez-Lopez, Jorge; Ibar, Edo; Inami, Hanae; Infante, Leopoldo; Hodge, Jacqueline; Karim, Alex; Le Fevre, Olivier; Magnelli, Benjamin; Neri, Roberto; Oesch, Pascal; Ota, Kazuaki; **Popping, Gergö**; Rix, Hans-Walter; Sargent, Mark; Sheth, Kartik; van der Wel, Arjen; van der Werf, Paul; Wagg, Jeff, 2016, ApJ, 833, 67<sup>[OA]</sup>
  39. Properties of damped Ly  $\alpha$  absorption systems and star-forming galaxies in semi-analytic models at  $z = 2$ , Berry, M.; Somerville, R.S.; Gawiser, E.; Maller, A.H.; **Popping, G.**; Trager, S. C., MNRAS, 2016, 458, 531B<sup>[OA]</sup>
  40. Star formation in semi-analytic galaxy formation models with multiphase gas, Somerville, R.S.; **Popping, G.**; Trager, S.C., MNRAS, 2015, 453, 4337<sup>[OA]</sup>
  41. Damped Ly $\alpha$  absorption systems in semi-analytic models with multiphase gas, M. Berry, R.S. Somerville, M.R. Haas, E. Gawiser, A. Maller, **G. Popping**, S.C. Trager, MNRAS, 2014, 441, 939<sup>[OA]</sup>
  42. PdBI Cold Dust Imaging of Two Extremely Red H - [4.5] > 4 Galaxies Discovered with SEDS and CANDELS, Caputi, K. I., Michalowski, M. J., Krips, M., Geach, J. E., Ashby, M. L. N.,

Huang, J.-S., Fazio, G. G., Koekemoer, A. M., **Popping, G.**, Spaans, M., Castellano, M., Dunlop, J. S., Fontana, A., Santini, P., ApJ, 2014, 788, 126<sup>[OA]</sup>