

# Boncho Bonev

## List of Publications by Year in descending order

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56  
papers

2,023  
citations

172457

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docs citations

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times ranked

1015  
citing authors

#	ARTICLE	IF	CITATIONS
1	Parent Volatiles in Comet 9P/Tempel 1: Before and After Impact. <i>Science</i> , 2005, 310, 270-274.	12.6	168
2	A SENSITIVE SEARCH FOR DEUTERATED WATER IN COMET 8P/TUTTLE. <i>Astrophysical Journal</i> , 2009, 690, L5-L9.	4.5	120
3	Water Production Rates, Rotational Temperatures, and Spin Temperatures in Comets C/1999 H1 (Lee), C/1999 S4, and C/2001 A2. <i>Astrophysical Journal</i> , 2005, 621, 537-544.	4.5	98
4	Detection of Formaldehyde Emission in Comet C/2002 T7 (LINEAR) at Infrared Wavelengths: Line-by-Line Validation of Modeled Fluorescent Intensities. <i>Astrophysical Journal</i> , 2006, 650, 470-483.	4.5	82
5	A Comprehensive Study of Infrared OH Prompt Emission in Two Comets. I. Observations and Effective Factors. <i>Astrophysical Journal</i> , 2006, 653, 774-787.	4.5	76
6	A Search for Variation in the H <sub>2</sub> O Ortho-Para Ratio and Rotational Temperature in the Inner Coma of Comet C/2004 Q2 (Machholz). <i>Astrophysical Journal</i> , 2007, 661, L97-L100.	4.5	67
7	TEMPORAL AND SPATIAL ASPECTS OF GAS RELEASE DURING THE 2010 APPARITION OF COMET 103P/HARTLEY 2. <i>Astrophysical Journal Letters</i> , 2011, 734, L7.	8.3	67
8	HIGHLY DEPLETED ETHANE AND MILDLY DEPLETED METHANOL IN COMET 21P/GIACOBINI-ZINNER: APPLICATION OF A NEW EMPIRICAL $\frac{1}{2}$ -BAND MODEL FOR CH <sub>3</sub> OH NEAR 50 K. <i>Astrophysical Journal</i> , 2013, 763, 1.	4.5	56
9	CHEMICAL COMPOSITION OF COMET C/2007 N3 (LULIN): ANOTHER "ATYPICAL" COMET. <i>Astrophysical Journal</i> , 2012, 750, 102.	4.5	55
10	The Peculiar Volatile Composition of CO-dominated Comet C/2016 R2 (PanSTARRS). <i>Astronomical Journal</i> , 2019, 158, 128.	4.7	55
11	The Volatile Composition of the Split Ecliptic comet 73P/Schwassmann-Wachmann 3: A Comparison of Fragments C and B. <i>Astrophysical Journal</i> , 2006, 650, L87-L90.	4.5	54
12	A high-resolution infrared spectral survey of Comet C/1999 H1 Lee. <i>Icarus</i> , 2006, 184, 255-276.	2.5	52
13	THE CHEMICAL COMPOSITION OF CO-RICH COMET C/2009 P1 (GARRADD) AT $R_{>h} = 2.4$ and 2.0 AU BEFORE PERIHELION. <i>Astrophysical Journal Letters</i> , 2012, 748, L13.	8.3	50
14	The Peculiar Volatile Composition of Comet 8P/Tuttle: A Contact Binary of Chemically Distinct Cometesimals?. <i>Astrophysical Journal</i> , 2008, 680, L61-L64.	4.5	48
15	Evidence for two modes of water release in Comet 103P/Hartley 2: Distributions of column density, rotational temperature, and ortho-para ratio. <i>Icarus</i> , 2013, 222, 740-751.	2.5	48
16	The organic composition of Comet C/2001 A2 (LINEAR). <i>Icarus</i> , 2008, 194, 347-356.	2.5	44
17	Organic Volatiles in Comet 73P-B/Schwassmann-Wachmann 3 Observed during Its Outburst: A Clue to the Formation Region of the Jupiter-Family Comets. <i>Astrophysical Journal</i> , 2007, 668, L75-L78.	4.5	43
18	EN ROUTE TO DESTRUCTION: THE EVOLUTION IN COMPOSITION OF ICES IN COMET D/2012 S1 (ISON) BETWEEN 1.2 AND 0.34 AU FROM THE SUN AS REVEALED AT INFRARED WAVELENGTHS*. <i>Astrophysical Journal</i> , 2016, 820, 34.	4.5	41

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19	Depleted Carbon Monoxide in Fragment C of the Jupiter-Family Comet 73P/Schwassmann-Wachmann 3. <i>Astrophysical Journal</i> , 2007, 661, L101-L104.	4.5	40
20	GROUND-BASED INFRARED DETECTIONS OF CO IN THE CENTAUR-COMET 29P/SCHWASSMANN-WACHMANN 1 AT 6.26 AU FROM THE SUN. <i>Astrophysical Journal</i> , 2013, 766, 100.	4.5	40
21	Pre- and post-perihelion observations of C/2009 P1 (Garradd): Evidence for an oxygen-rich heritage?. <i>Icarus</i> , 2014, 228, 167-180.	2.5	39
22	The organic composition of C/2001 A2 (LINEAR)II. Search for heterogeneity within a comet nucleus. <i>Icarus</i> , 2007, 188, 224-232.	2.5	38
23	COMET C/2004 Q2 (MACHHOLZ): PARENT VOLATILES, A SEARCH FOR DEUTERATED METHANE, AND CONSTRAINT ON THE CH <sub>4</sub> SPIN TEMPERATURE. <i>Astrophysical Journal</i> , 2009, 699, 1563-1572.	4.5	37
24	The organic composition of Comet C/2000 WM1 (LINEAR) revealed through infrared spectroscopy. <i>Icarus</i> , 2010, 206, 764-777.	2.5	36
25	C/2013 R1 (LOVEJOY) AT IR WAVELENGTHS AND THE VARIABILITY OF CO ABUNDANCES AMONG OORT CLOUD COMETS. <i>Astrophysical Journal</i> , 2014, 791, 122.	4.5	36
26	The Unusual Volatile Composition of the Halley-Type Comet 8P/Tuttle: Addressing the Existence of an Inner Oort Cloud. <i>Astrophysical Journal</i> , 2008, 683, L71-L74.	4.5	34
27	Hypervolatiles in a Jupiter-family Comet: Observations of 45P/Hondaâ€œMrkosâ€œPajduÅ;Å;kovÅ; Using iSHELL at the NASA-IRTF. <i>Astronomical Journal</i> , 2017, 154, 246.	4.7	34
28	IRCS/Subaru observations of water in the inner coma of Comet 73P-B/Schwassmannâ€œWachmann 3: Spatially resolved rotational temperatures and orthoâ€œpara ratios. <i>Icarus</i> , 2008, 196, 241-248.	2.5	29
29	THE UNEXPECTEDLY BRIGHT COMET C/2012 F6 (LEMMON) UNVEILED AT NEAR-INFRARED WAVELENGTHS. <i>Astronomical Journal</i> , 2014, 147, 15.	4.7	29
30	The 67P/Churyumovâ€œGerasimenko observation campaign in support of the Rosetta mission. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160249.	3.4	29
31	A Comprehensive Study of Infrared OH Prompt Emission in Two Comets. II. Implications for Unimolecular Dissociation of H <sub>2</sub> O. <i>Astrophysical Journal</i> , 2006, 653, 788-791.	4.5	27
32	A Tale of â€œTwoâ€œComets: The Primary Volatile Composition of Comet 2P/Encke Across Apparitions and Implications for Cometary Science. <i>Astronomical Journal</i> , 2018, 156, 251.	4.7	27
33	High-resolution infrared spectroscopic measurements of Comet 2P/Encke: Unusual organic composition and low rotational temperatures. <i>Icarus</i> , 2013, 223, 298-307.	2.5	26
34	THE VOLATILE COMPOSITION OF COMET C/2003 K4 (LINEAR) AT NEAR-IR WAVELENGTHSâ€œCOMPARISONS WITH RESULTS FROM THE NANÅ;AY RADIO TELESCOPE AND FROM THE<i>ODIN</i>,<i>SPITZER</i>, AND<i>SOHO</i>SPACE OBSERVATORIES. <i>Astrophysical Journal</i> , 2015, 808, 1.	4.5	25
35	Probing the Evolutionary History of Comets: An Investigation of the Hypervolatiles CO, CH <sub>4</sub> , and C <sub>2</sub> H <sub>6</sub> in the Jupiter-family Comet 21P/Giacobiniâ€œZinner. <i>Astronomical Journal</i> , 2020, 159, 42.	4.7	23
36	First Comet Observations with NIRSPEC-2 at Keck: Outgassing Sources of Parent Volatiles and Abundances Based on Alternative Taxonomic Compositional Baselines in 46P/Wirtanen. <i>Planetary Science Journal</i> , 2021, 2, 45.	3.6	22

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37	A new model for the $\hat{1}/2$ vibrational band of HCN in cometary comae, with application to three comets. <i>Astronomy and Astrophysics</i> , 2013, 551, A51.	5.1	21
38	Molecular composition of comet 46P/Wirtanen from millimetre-wave spectroscopy. <i>Astronomy and Astrophysics</i> , 2021, 648, A49.	5.1	20
39	The formation heritage of Jupiter Family Comet 10P/Tempel 2 as revealed by infrared spectroscopy. <i>Icarus</i> , 2012, 218, 644-653.	2.5	19
40	A multi-wavelength study of parent volatile abundances in Comet C/2006 M4 (SWAN). <i>Icarus</i> , 2009, 203, 589-598.	2.5	17
41	THE INNER COMA OF COMET C/2012 S1 (ISON) AT 0.53 AU AND 0.35 AU FROM THE SUN. <i>Astrophysical Journal Letters</i> , 2014, 796, L6.	8.3	17
42	Post-perihelion volatile production and release from Jupiter-family comet 45P/Honda-Mrkos-Pajduřkov. <i>Icarus</i> , 2020, 335, 113411.	2.5	17
43	Carbonyl Sulfide (OCS): Detections in Comets C/2002 T7 (LINEAR), C/2015 ER61 (PanSTARRS), and 21P/Giacobini-Zinner and Stringent Upper Limits in 46P/Wirtanen. <i>Astronomical Journal</i> , 2020, 160, 184.	4.7	17
44	Beyond 3 au from the Sun: The Hypervolatiles CH <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , and CO in the Distant Comet C/2006 W3 (Christensen). <i>Astronomical Journal</i> , 2017, 153, 241.	4.7	13
45	Comet C/2013 V5 (Oukaimeden): Evidence for Depleted Organic Volatiles and Compositional Heterogeneity as Revealed through Infrared Spectroscopy. <i>Astronomical Journal</i> , 2018, 156, 258.	4.7	12
46	The Composition of Comet C/2012 K1 (PanSTARRS) and the Distribution of Primary Volatile Abundances Among Comets. <i>Astronomical Journal</i> , 2017, 153, 168.	4.7	11
47	Quantifying the Hypervolatile Abundances in Jupiter-family Comet 46P/Wirtanen. <i>Planetary Science Journal</i> , 2021, 2, 21.	3.6	11
48	Testing Short-term Variability and Sampling of Primary Volatiles in Comet 46P/Wirtanen. <i>Planetary Science Journal</i> , 2021, 2, 20.	3.6	10
49	Rapidly Varying Anisotropic Methanol (CH <sub>3</sub> OH) Production in the Inner Coma of Comet 46P/Wirtanen as Revealed by the ALMA Atacama Compact Array. <i>Planetary Science Journal</i> , 2021, 2, 55.	3.6	9
50	Chemical Composition of Outbursting Comet C/2015 ER61 (PanSTARRS). <i>Astronomical Journal</i> , 2021, 162, 145.	4.7	7
51	The Volatile Composition of the Inner Coma of Comet 46P/Wirtanen: Coordinated Observations Using iSHELL at the NASA-IRTF and Keck/NIRSPEC-2. <i>Planetary Science Journal</i> , 2021, 2, 54.	3.6	6
52	Molecular composition of short-period comets from millimetre-wave spectroscopy: 21P/Giacobini-Zinner, 38P/Stephan-Oterma, 41P/Tuttle-Giacobini-Kresák, and 64P/Swift-Gehrels. <i>Astronomy and Astrophysics</i> , 2021, 651, A25.	5.1	5
53	Comets in Context: Comparing Comet Compositions with Protosolar Nebula Models. <i>Astrophysical Journal</i> , 2022, 931, 164.	4.5	5
54	Volatile Abundances, Extended Coma Sources, and Nucleus Ice Associations in Comet C/2014 Q2 (Lovejoy). <i>Planetary Science Journal</i> , 2022, 3, 6.	3.6	4

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55	AN INFRARED SEARCH FOR HDO IN COMET D/2012 S1 (ISON) AND IMPLICATIONS FOR ISHELL. <i>Astrophysical Journal</i> , 2016, 816, 101.	4.5	3
56	Volatile Composition and Outgassing in C/2018 Y1 (Iwamoto): Extending Limits for High-resolution Infrared Cometary Spectroscopy between 2.8 and 5.0 $\mu$ m. <i>Planetary Science Journal</i> , 2021, 2, 225.	3.6	3