

S No	<u>CML 514 Assignment II</u> Searching Chemistry Literature – Please download/print read, study and answer the given five questions at the end of this table in your own words. Grammatical mistakes will lose marks.	Entry Number of the student who is assigned this paper
1	Wang Y, Quillian B, Wei P, Wannere C S, Xie Y, King R B, Schaefer, III, H F, Schleyer P v R, Robinson G H, A stable neutral diborene containing a B=B double bond, <i>J. Am. Chem. Soc.</i> , 2007 Vol. 129, 12412.	2018CYS7011
2	Braunschweig H, Dewhurst R D, Hammond K, Mies J, Radacki K, Vargas A, Ambient-temperature isolation of a compound with a boron-boron triple bond, <i>Science</i> , 2012 Vol. 336, 1420.	2018CYS7010
3	Brauschweig, H, Dellermann T, Dewhurst R D, Ewing W C, Hammond K, Oscar J, Jimenez-Halla C, Kramer T, Krummenacher I, Mies J, Phukan A K, Vargas A, Metal-free binding and coupling of carbon monoxide at a boron-boron triple bond, <i>Nature Chem.</i> , 2013, Vol. 5, 1025.	2018CYS7012
4	Piazza, Z A, Hu H S, Li, W L, Zhao Y F, LI J, Wang L S, Planar hexagonal B36 as a potential basis for extended single-atom layer boron sheets, <i>Nature Commun.</i> , 2015, Vol. 5, 3113.	2018CYS7014
5	Zhai H-J, Zhao Y-F, Li W-L, Chen Q, Bai H, Hu H-S, Piazza Z A, Tian W-J, Lu H-G, Wu Y-B, Mu Y-W, Wei G-F, Liu Z-P, LI J, Li S-D, Wang L-S, Observation of an all-boron fullerene, <i>Nature Chem.</i> , 2014, Vol. 6, 727.	2018CYS7013
6	Segawa Y, Yamashita M, Nozaki K, Boryllithium: Isolation, characterization and reactivity as a boryl anion, <i>Science</i> , 2006, Vol. 314, 113.	2018CYS7015
7	Soleilhavoup M, Bertrand G, Borylenes: An emerging class of compounds, <i>Angew. Chem. Int. Ed.</i> , 2017, Vol. 56, 10282.	2018CYS7017
8	Yang Z, Zhong M, Ma X, De S, Anusha K, Parameshwaran P, Roesky H W, An aluminum hydride that functions as a transition metal catalyst, <i>Angew. Chem. Int. Ed.</i> , 2015, Vol. 54, 10225.	2018CYS7016
9	Bismuto A, Cowley M J, Thomas S P Aluminum catalyzed hydroboration of alkenes, <i>ACS Catal</i> , 2018 Vol.8, 2001.	2018CYS7018
10	Bag P, Porzelt P, Altmann P J, Inoue S, A stable neutral compound with an aluminum-aluminum double bond, <i>J. Am. Chem. Soc.</i> , 2017, Vol. 139, 14384.	2018CYS7019
11	Melami M, Jazzar R, Soleilhavoup M, Bertrand G, Cyclic (alkyl)(amino)carbenes (CAACs): Recent developments, <i>Angew. Chem. Int. Ed.</i> , 2017, Vol. 56, 10046.	2018CYS7020
12	Alvarado-Beltran I, Rosas-Sanchez A, Baceiredo A, Saffon – Merceron N, Branchadell V, Kato T, A fairly stable crystalline silanone, <i>Angew Chem. Int. Ed.</i> , 2017 Vol. 56, 10481.	2018CYS7002

13	Ishida S, Abe T, Hirakwa F, Kosai T, Sato K, Persistent dialkylsilanone generated by dehydrobromination of dialkylbromosilanol, <i>Chem. Eur. J.</i> , 2015 Vol. 21, 15057.	2018CYS7003
14	Fillipou A C, Baars B, Chernov O, Lebdev Y N, Schankenburg G, Silicon -oxygen double bonds: a stable silanone with a trigonal planar coordinated silicon centre, <i>Angew. Chem. Int. Ed.</i> , 2014 Vol. 53, 565.	2018CYS7004
15	Li L, Fukawa T, Matsuo T, Hashizume D, Fueno H, Tanaka K, Tamao K, A stable germanone as the first isolated heavy ketone with a terminal oxygen atom, <i>Nature Chem.</i> , 2012 Vol. 4, 361.	2018CYS7005
16	Xiong Y, Yao S, Inoue S, Epping J D, Driess M, A cyclic silylone (siladycarbene) with an electron rich silicon(0) atom, <i>Angew. Chem. Int. Ed.</i> , 2013, Vol. 52, 7147.	2018CYS7006
17	Xiong Y, Yao S, Mueller R, Kaupp M, Driess M, From silylone to an isolable monomeric silicon disulfide complex, <i>Angew. Chem. Int. Ed.</i> , 2015, Vol. 54, 10254.	2018CYS7007
18	Sinhababu S, Yadav D, Karwasara S, Sharma M K, Mukherjee G, Rajaraman R, Nagendran S, <i>Angew. Chem. Int. Ed.</i> , 2016, Vol. 128, 7873	2018CYS7021
19	Rit A, Campos J, Niu H, Aldridge S, A stable heavier group 14 analogue of vinylidene, <i>Nature Chem.</i> , 2016, Vol. 8, 1022.	2018CYS7009
20	Zhang C, Sun C, Hu B, Yu C, Lu M Synthesis and characterization of the pentazolate anion cyclo-N ₅ ⁻ in (N ₅) ₆ (H ₃ O) ₃ (NH ₄) ₄ Cl, <i>Science</i> , 2017, Vol. 355, 374.	2018CYS7008
21	Sun C, Zhang C, Jiang C, Yang C, Du Y, Zhao Y, Hu B, Zheng Z and Christie K O, Synthesis of AgN ₅ and its extended 3D energetic framework, <i>Nature Commun.</i> , 2018, Vol. 9, 1269.	2018CYS7050
22	Zhang C, Yang C, Hu B, Yu C, Zheng C and Sun C, A symmetric Co(N ₅) ₂ (H ₂ O) ₄ .4 H ₂ O high nitrogen compound formed by cobalt (II) cation trapping of a cyclic N ₅ ⁻ anion, <i>Angew. Chem. Int. Ed.</i> , 2017, Vol. 56, 4512	2018CYS7051
23	Mummadi S, Unruh D K, Zhao J, Li S, Krempner, C, Inverse frustrated Lewis pairs- activation of dihydrogen with organosuperbases and moderate to weak Lewis acids, <i>J. Am. Chem. Soc.</i> , 2016, Vol. 138, 3286.	2018CYS7052
24	Chernichenko K, Madarasz A, Papai I, Nieger M, Leskela M, Repo, T, A frustrated Lewis pair approach to catalytic reduction of alkynes to cis-alkenes, <i>Nature Chem.</i> , 2013, Vol.5, 718.	2018CYS7053
25	Kino R, Donnadiou B, Bertrand G, Isolation of a carbene-stabilized phosphorus mononitride and its radical cation (PN ⁺). <i>Angew. Chem. Int. Ed.</i> 2010, Vol. 49, 5930.	2018CYS7054
26	Masuda J D, Schoeller, W W, Donnadiou B, Bertrand G, Carbene activation of P ₄ and subsequent derivatization, <i>Angew. Chem. Int. Ed.</i> 2007, Vol. 46, 7052.	2018CYS7055

27	Wang Y Z, Xie Y M, Wei P R, King R B, Schaefer H F, Schleyer P V, Robinson G H, Carbene-stabilized diphosphorus, <i>J. Am. Chem. Soc.</i> , 2008 Vol. 130, 14970	2018CYS7056
28	Wiedermann L, Pfukusa R, Klumperman B, Phosphazene base promoted anionic polymerization of n- butyraldehyde, <i>Eur. Polym. J.</i> , 2017, 97.	2014BB10062
29	Kretschmer R, Ruiz D A, Moore C E, Rheingold A L, Bertrand G, One-, two-, and three- electron reduction of a cyclic alkyl(amino)carbene–SbCl ₃ adduct <i>Angew. Chem. Int. Ed.</i> , 2014, Vol. 53, 8176.	2018CYS7031
30	Ishida S, Hirakawa F, Furukawa K, Yoza K, Iwamoto T, Persistent antimony and bismuth centered radicals in solution, <i>Angew. Chem.</i> , 2014, Vol. 126, 11354	2018CYS7032
31	Borden W T, Hoffmann R, Stuyver T and Chen B, Dioxygen: What makes this triplet diradical kinetically persistent? <i>J. Am. Chem. Soc.</i> , 2017, Vol. 139, 9010.	2018CYS7033
32	Troyan I, Gavriluk A, Ruffer R, Chumakov A, Mironovich A, Lyubutin I, Perkalin D, Drozdov A P and Ermets M I, Observation of superconductivity in hydrogen sulfide from nuclear resonant scattering, <i>Science</i> , 2016, Vol. 351, 1303. Yao Y and Tse J S, Superconducting hydrogen sulfide, <i>Chem. Eur. J.</i> , 2018, Vol. 24, 1769	2018CYS7034
33	Bhowmick D, Srivastava S, D'Silva P and Muges G, Highly efficient glutathione peroxidase and peroxiredoxinmimetics protect mammalian cells against oxidative damage, <i>Angew. Chem. Int. Ed.</i> , 2015, Vol. 54, 8449.	2018CYS7036
34	Balkrishna S J, Bhakuni B S, Chopra D and Kumar S, Cu catalysed efficient synthetic methodology for ebselen and related Se–N heterocycles, <i>Org. Lett.</i> , 2010, Vol. 12, 5394.	2018CYS7038
35	Boyle P D, Cross W I, Godfrey S M, Stephen M, McAuliffe C A, Pritchard RG, Sarwar S and Sheffied J M, Synthesis and characterisation of Ph ₄ Te ₄ I ₄ containing a Te ₄ square and Ph ₃ PTePhI, <i>Angew Chem. Int. Ed.</i> , 2000, Vol. 39, 1796.	2018CYS7037
36	Minoura M, Sagami T, Akiba K, Modrakowski, C, Sudau A and Seppelt, K, Hexaaryltellurium, the first neutral compound comprising hexaarylated elements, <i>Angew. Chem. Int. Ed.</i> , 1996, Vol. 35, 2660.	2018CYS7035
37	Khan S B J, Lewis R D, Chen K and Arnold F H, Directed evolution of cytochrome C for C–Si bond formation. Bringing silicon to life, <i>Science</i> , 2016, Vol. 354, 1048.	2018CYS7039
38	Mondal K C, Roesky H W, Schwarzer M C, Frenking G, Niepotter B, Wolf H, Herbst- Irmer R and Stalke D, A stable	2018CYS7041

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39	Dyker C, Lavallo V, Donnadieu B and Bertrand G, Synthesis of an extremely bent acyclic allene (carbodicarbene): A strong donor ligand, <i>Angew Chem. Int. Ed.</i> , 2008, Vol. 47, 3206.	2018CYS7042
40	auf der Gruenne J S, Mangst L M and Kraus F, Occurrence of difluorine F ₂ in nature-In situ proof and quantification by NMR Spectroscopy, <i>Angew. Chem. Int. Ed.</i> , 2012, Vol. 51, 7847.	
41	Nava M, Stoyanova I V, Cummings S, Stoyanov E S and Reed C A, The strongest Brønsted acid: Protonation of alkanes by H(CHB ₁₁ F ₁₁) at room temperature, <i>Angew. Chem. Int. Ed.</i> , 2014, Vol. 53, 1131.	2018CYS7043
42	S. Liu, M.-A. Légaré, D. Auerhammer, A. Hofmann, H. Braunschweig The First Boron-Tellurium Double Bond: Direct Insertion of Heavy Chalcogens into a Mn=B Double Bond <i>Angew. Chem.</i> 2017, 129, 15968–15971; [pdf] <i>Angew. Chem. Int. Ed.</i> 2017, 56, 15760–15763.	2018CYS7045
43	Fujimoto T, Ritter T, PhenoFluor Mix: Practical chemoselective deoxyfluorination of phenols, <i>Org. Lett.</i> 2015 Vol. 17, 544.	2018CYS7044
44	Douvrin Ozerov O V, Hydrodefluorination of perfluoroalkyl groups using silylium carborane catalysts, <i>Science</i> , 2008 Vol. 321, 1188	2018CYS7046
45	Kikushima K, Grellier M, Ohashi M, Ogoshi S, Transition metal free catalytic hydrodefluorination of polyfluoroarenes by concerted nucleophilic aromatic substitution with a hydrosilicate, <i>Angew. Chem. Int. Ed.</i> , 2017, Vol. 56, 16191.	2018CYS7048
46	Lozinsek M, Mercier H P A, Brock D S, Zemva B, Schrobilgen G A, Coordination of KrF ₂ to the naked metal cation Mg ²⁺ , <i>Angew. Chem. Int. Ed.</i> , 2017 Vol. 56, 6251.	2018CYS7049
47	Tramšek M, Benkič P, Žemva B, The first compound containing a metal center in a homoleptic environment of XeF ₂ molecules, <i>Angew. Chem. Int. Ed.</i> , 2004 Vol. 43, 3456.	2018CYS7047
48	Seidel S, Seppelt K, Xenon as a complex ligand: The tetra xenon gold(II) cation in AuXe ₄ ⁺ (Sb ₂ F ₁₁ ⁻) ₂ <i>Science</i> , 2000 Vol. 290, 117.	2018CYS7040
49	Brock D S, Schrobilgen G J, Synthesis of the missing oxide of xenon, XeO ₂ , and its implications for earth's missing xenon, <i>J. Am. Chem. Soc.</i> , 2011 Vol. 133, 6265.	2018CYS7022
50	Khriachtchev L, Petterson M, Runeberg N, Lundell J, Räsänen M, A stable argon compound, <i>Nature</i> , 2000, Vol. 406, 874.	2018CYS7023

51	Schweizer U and Steegborn C, Thyroid hormones: From crystal packing to activity to reactivity, <i>Angew Chem. Int. Ed.</i> , 2015, Vol. 54, 12856.	2018CYS7024
52	Hwang I C, Seidel S, Seppelt K, Gold(I) and Mercury(II) Xenon Complexes, <i>Angew. Chem. Int. Ed.</i> , 2003 Vol. 42, 4392.	2018CYS7025
53	Nitrogen fixation and reduction at boron Marc-André LégaréGuillaume Bélanger-Chabot, Rian D. Dewhurst, Eileen Welz, Ivo Krummenacher, Bernd Engels, Holger Braunschweig, <i>Science</i> 23 Feb 2018: Vol. 359, Issue 6378, pp. 896-900	2018CYS7026
54	H. Braunschweig, R. D. Dewhurst, J. O. C. Jiménez-Halla, E. Matito, J. H. Müssig Transition Metal π -Ligation of a Tetrahalodiborane <i>Angew. Chem. Int. Ed.</i> 2018, 57, 412–416	2018CYS7027
55	J. Böhnke, H. Braunschweig, J. O. C. Jiménez-Halla, I. Krummenacher, T. E. Stennett Half-Sandwich Complexes of an Extremely Electron-Donating, Redox-Active η^6 -Diborabenzene Ligand <i>J. Am. Chem. Soc.</i> 2018, 140, 848–853.	
56	H. Braunschweig, I. Krummenacher, C. Lichtenberg, J. D. Mattock, M. Schäfer, U. Schmidt, C. Schneider, T. Steffenhagen, S. Ullrich, A. Vargas Dibora[2]ferrocenophane: A Carbene-Stabilized Diborene in a Strained cis-Configuration <i>Angew. Chem. Int. Ed.</i> 2017, 56, 889–892.	2018CYS7029
57	H. Braunschweig, T. Dellermann, R. D. Dewhurst, B. Hupp, T. Kramer, J. Mattock, J. Mies, A. K. Phukan, A. Steffen, A. Vargas Strongly Phosphorescent Transition Metal π -Complexes of Boron-Boron Triple Bonds <i>J. Am. Chem. Soc.</i> 2017, 139, 4887–4893.	2018CYS7028
58	H. Braunschweig, T. Dellermann, W. C. Ewing, T. Kramer, C. Schneider, S. Ullrich Reductive Insertion of Elemental Chalcogens into Boron-Boron Multiple Bonds <i>Angew. Chem. Int. Ed.</i> 2015, 54, 10271–10275.	2018CYS7030

Submit your assignment II on or before October 24, 2018 by answering the following questions along with a hardcopy of the research paper

1. Write one full page about why this work is important and what are the important finding in this work *in your own words*. Copying any sentence fully from the paper will result in zero marks (minimum 2 paragraphs)
2. Find out three RECENT research papers on the corresponding author of this paper and write down the paper references EXACTLY in the (A) ACS style

(B) RSC style

(C) Wiley VCH Style

Please indicate the style above each of the references

Write your full name and signature.