- [1]A.A. Chialvo and P.T. Cummings, *J. Chem. Phys.* **101**, 4466 (1994).
- [2]A. A. Chialvo and J. Horita, *J. Chem. Phys.* **133** (7) (2010).
- [3] Ariel A. Chialvo and Peter T. Cummings, in *Adv. Chem. Phys.* (John Wiley & Sons Inc, 605 3rd Ave, New York, NY 10016 USA, 1999), Vol. 109 pp. 115-205.
- [4]Ariel A. Chialvo and Lukas Vlcek, *The Journal of Physical Chemistry B* **118** (47), 13658 (2014).
- [5]A.A. Chialvo, P.T. Cummings, J.M. Simonson, R.E. Mesmer, and H.D. Cochran, *Industrial and Engineering Chemistry Research* **37**, 3021 (1998).
- [6]A.A. Chialvo and P.T. Cummings, J. Phys. Chem. 100, 1309 (1996); A.A. Chialvo, E. Yezdimer, T. Driesner, P.T. Cummings, and J.M. Simonson, Chem. Phys. 258, 109 (2000).
- [7]A.A. Chialvo and P.T. Cummings, *J. Chem. Phys.* **105**, 8274 (1996).
- [8]A.A. Chialvo and P.T. Cummings, Fluid Phase Equilib. 150-151, 73 (1998).
- [9]P. Paricaud, M. Predota, A. A. Chialvo, and P. T. Cummings, *J. Chem. Phys.* **122** (24), 244511 (2005).
- [10] Ariel A. Chialvo, Filip Moucka, Lukas Vlcek, and Ivo Nezbeda, *The Journal of Physical Chemistry B* **119** (15), 5010 (2015).
- [11]K. M. Benjamin, A. J. Schultz, and D. A. Kofke, *Journal of Physical Chemistry C* 111 (43), 16021 (2007).
- [12] J. L. Rivera, F. W. Starr, P. Paricaud, and P. T. Cummings, J. Chem. Phys. 125 (9) (2006).
- [13]P. T. Kiss and A. Baranyai, *J. Chem. Phys.* **131** (20) (2009).
- [14]F. Moucka and I. Nezbeda, J. Chem. Phys. 145 (24), 244501 (2016).
- [15]S. Yesodharan, *Current Science* **82** (9), 1112 (2002); A. A. Chialvo and J. M. Simonson, *Journal of Physical Chemistry C* **111** (43), 15569 (2007); Philip A. Marrone, *J. Supercrit. Fluids* **79**, 283 (2013); D. T. Kallikragas, I. M. Svishchev, and K. I. Choudhry, *Journal of Physical Chemistry C* **121** (1), 80 (2017).
- [16]T. Moore, EPRI Journal (Summer), 6 (2005); R. Viswanathan, J. F. Henry, J. Tanzosh, G. Stanko, J. Shingledecker, B. Vitalis, and R. Purgert, J. Mater. Eng. Perform. 14 (3), 281 (2005); Ariel A. Chialvo, Miroslaw S. Gruszkiewicz, and David R. Cole, Journal of Chemical & Engineering Data 55 (5), 1828 (2010); G. R. Holcomb, Oxid. Met. 82 (3-4), 271 (2014); W. H. Yeo, A. T. Fry, J. Purbolaksono, S. Ramesh, J. I. Inayat-Hussain, H. L. Liew, and M. Hamdi, J. Supercrit. Fluids 92, 215 (2014).
- [17]A. Hafizi, M. R. Rahimpour, and S. Hassanajili, *Applied Energy* **165**, 685 (2016); Jannike Solsvik, Tore Haug-Warberg, and Hugo A. Jakobsen, *Chem. Eng. Sci.* **140**, 261 (2016).
- [18]Y. Shin, W. Park, J. Chang, and J. Park, *Int. J. Hydrogen Energy* 32 (10-11), 1486 (2007); F. M. Sapountzi, J. M. Gracia, C. J. Weststrate, H. O. A. Fredriksson, and J. W. Niemantsverdriet, *Prog. Energy Combust. Sci.* 58, 1 (2017).
- [19]R. Thiery and L. Mercury, Journal of Geophysical Research-Solid Earth 114 (2009); Hanna Kaasalainen and Andri Stefánsson, Chem. Geol. 330–331, 60 (2012); B. Fegley, N. S. Jacobson, K. B. Williams, J. M. C. Plane, L. Schaefer, and K. Lodders, Astrophysical Journal 824 (2), 103 (2016).
- [20]R. Lanzafame and M. Messina, International Journal of Thermodynamics 9 (2), 73 (2006); Abdelkrim Benmansour, Abdelkrim Liazid, Pierre-Olivier Logerais, and Jean-Félix Durastanti, Journal of Thermal Science 25 (1), 97 (2016); Rui Xue, Chunbo Hu, Vishal Sethi, Theoklis Nikolaidis, and Pericle Pilidis, Appl. Therm. Eng. 104, 249 (2016).
- [21] Antonella Ingenito and Claudio Bruno, *J. Propul. Power* **20** (6), 1056 (2004); Hojat Ghassemi and Hamidreza Farshi Fasih, *Aerospace Science and Technology* **28** (1), 1

- (2013); Jeffrey M. Bergthorson, Yinon Yavor, Jan Palecka, William Georges, Michael Soo, James Vickery, Samuel Goroshin, David L. Frost, and Andrew J. Higgins, *Applied Energy* **186, Part 1**, 13 (2017).
- [22]W. Wagner and A. Pruss, J. Phys. Chem. Ref. Data 31 (2), 387 (2002).
- [23]L. Haar, J.S. Gallagher, and G.S. Kell, *Steam Tables* (Hemisphere Publishing Corporation, New York, 1984).
- [24]D. Bücker, R. Span, and W. Wagner, *Journal of Engineering for Gas Turbines and Power* **125** (1), 374 (2003).
- [25]L. X. Dang and T. M. Chang, *J. Chem. Phys.* **106** (19), 8149 (1997); P. T. Kiss and A. Baranyai, *J. Chem. Phys.* **138** (20) (2013).
- [26]K. Yoshida, N. Matubayasi, and M. Nakahara, J. Chem. Phys. 125 (7) (2006).
- [27]K. Yoshida, N. Matubayasi, and M. Nakahara, J. Chem. Phys. 126 (8) (2007).
- [28]C. G. Gray and K. E. Gubbins, *Theory of Molecular Fluids* (Oxford University Press, 1985).
- [29]Lukas Vlcek and Ariel A. Chialvo, *The Journal of Chemical Physics* **143** (14), 144110 (2015).
- [30] Jae Ho Bae and T. M. Reed, *Industrial & Engineering Chemistry Fundamentals* **6** (1), 67 (1967).
- [31] J. W. Perram and L. R. White, *Mol. Phys.* **28** (2), 527 (1974).
- [32]F. Danon and I. Amdur, *The Journal of Chemical Physics* **50** (11), 4718 (1969).
- [33]G. S. Rushbrooke, Transactions of the Faraday Society 36 (0), 1055 (1940).
- [34] A. D. Buckingham and J. A. Pople, Transactions of the Faraday Society 51 (0), 1173 (1955).
- [35]G. C. Maitland, M. Rigby, E. B. Smith, and W. Wakeham, *Intermolecular Forces: Their Origin and Determination* (Oxford University Press, 1981).
- [36] Phillip Paul and Jürgen Warnatz, *Symposium (International) on Combustion* **27** (1), 495 (1998).
- [37]M. L. Huber, R. A. Perkins, A. Laesecke, D. G. Friend, J. V. Sengers, M. J. Assael, I. N. Metaxa, E. Vogel, R. Mareš, and K. Miyagawa, *J. Phys. Chem. Ref. Data* **38** (2), 101 (2009).
- [38] Viola Teske, Eckhard Vogel, and Eckard Bich, *Journal of Chemical & Engineering Data* **50** (6), 2082 (2005).
- [39]Robert Hellmann and Eckhard Vogel, *Journal of Chemical & Engineering Data* **60** (12), 3600 (2015).
- [40]Taro Kihara, *Reviews of Modern Physics* **25** (4), 831 (1953).
- [41]S. Chapman and T. G. Cowling, *The Mathematical Theory of Non-Uniform Gases* (Cambridge University Press, 1939).
- [42] Sun Ung Kim and Charles W. Monroe, Journal of Computational Physics 273, 358 (2014).
- [43]D. Eisenberg and W. Kauzmann, *The Structure and Properties of Water* (Oxford University Press, New York, 1969).
- [44]T. R. Dyke and J. S. Muenter, J. Chem. Phys. 59 (6), 3125 (1973).
- [45]M. K. Hryniewicki, Master of Applied Science, University of Toronto, 2011.
- [46] A. H. Harvey and E. W. Lemmon, J. Phys. Chem. Ref. Data 33 (1), 369 (2004).
- [47]A.A. Chialvo, Fluid Phase Equilib. 83, 23 (1993).
- [48]M. L. Huber, R. A. Perkins, D. G. Friend, J. V. Sengers, M. J. Assael, I. N. Metaxa, K. Miyagawa, R. Hellmann, and E. Vogel, *J. Phys. Chem. Ref. Data* 41 (3), 033102 (2012).
- [49]F. L. Swinton, in *Diffusion Processes*, edited by J. N. Sherwood, A. V. Chadwick, W. M. Muir, and F. L. Swinton (Gordon and Breach, London, 1971), Vol. one pp. 53-63.
- [50]W.J. Lamb, G.A. Hoffman, and J. Jonas, J. Chem. Phys. 74, 6875 (1981).
- [51]K. Yoshida, C. Wakai, N. Matubayasi, and M. Nakahara, J. Chem. Phys. 123 (16) (2005).
- [52] Rocketdyne Propulsion & Power, (Boeing Co., 1998).

- [53] A. A. Chialvo, S. Chialvo, J. M. Simonson, and Y. V. Kalyuzhnyi, *J. Chem. Phys.* **128** (21), 214512 (2008).
- [54]J.P. O'Connell and J.M. Haile, *Thermodynamics: Fundamentals for Applications* (Cambridge University Press, New York, 2005).
- [55]S. Gordon and B. J. McBride, Computer program for calculation of complex chemical equilibrium compositions and applications. 1994.
- [56]P. S. Bishnu, D. Hamiroune, and M. Metghalchi, *Journal of Energy Resources Technology-Transactions of the Asme* **123** (3), 214 (2001).
- [57]J. Blecic, J. Harrington, and M. O. Bowman, *Astrophysical Journal Supplement Series* **225** (1), 4 (2016).
- [58]O. Venot, E. Hebrard, M. Agundez, M. Dobrijevic, F. Selsis, F. Hersant, N. Iro, and R. Bounaceur, *Astronomy & Astrophysics* **546**, A43 (2012).
- [59]http://spaceflight101.com/spx/spacex-raptor/, (2019).
- [60]B. Drummond, P. Tremblin, I. Baraffe, D. S. Amundsen, N. J. Mayne, O. Venot, and J. Goyal, Astronomy & Astrophysics 594, A69 (2016); J. W. Stock, D. Kitzmann, A. B. C. Patzer, and E. Sedlmayr, Monthly Notices of the Royal Astronomical Society 479 (1), 865 (2018).
- [61]Y. Singh and S. Singh, Journal of Physics Part B Atomic and Molecular Physics 4 (6), 776 (1971); A. K. Malik and N. C. Varshneya, The Journal of Chemical Physics 61 (7), 2640 (1974); O. M. Singh and A. W. Joshi, Pramana 15 (5), 407 (1980); Pankaj Pathak, Kiran Singh Baliyan, and Om Singh, Pramana 17 (2), 159 (1981); Pankaj Pathak and Om Singh, Pramana 17 (1), 93 (1981).
- [62] V. N. Huff, A. Fortini, and S. Gordon, edited by NACA RM E56D23 (Washington, 1956).
- [63]F. J. Vesely, Journal of Computational Physics 24 (4), 361 (1977).