



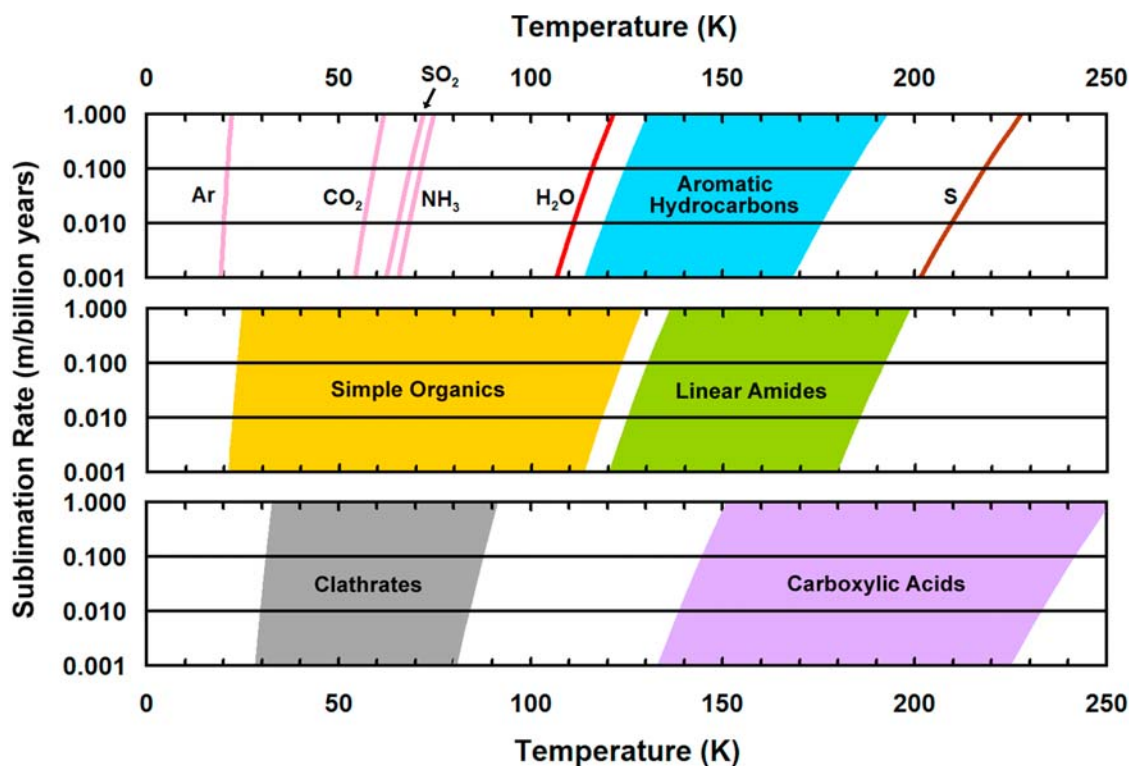
Correction to “Cold-trapped organic compounds at the poles of the Moon and Mercury: Implications for origins”

Jo Ann Zhang and David A. Paige

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[1] In the paper “Cold-trapped organic compounds at the poles of the Moon and Mercury: Implications for origins” by Jo Ann Zhang and David A. Paige (*Geophysical Research Letters*, *36*, L16203, doi:10.1029/2009GL038614), an incomplete version of Figure 1 was published. The complete Figure 1 and its caption appear here.



	Chemical Formula	Name	M (g/mol)	T _v (K)		Chemical Formula	Name	M (g/mol)	T _v (K)	
Inorganics	N ₂	Nitrogen	28.02	16.2	Aromatic Hydrocarbons	C ₇ H ₆ O	Benzaldehyde	106.13	114.6	
	CO	Carbon monoxide	28.01	18.2		C ₇ H ₆ O ₂	Salicylaldehyde	122.12	115.6	
	Ar	Argon	39.95	19.5		C ₆ H ₇ N	Aniline	93.13	116.5	
	Kr	Krypton	83.80	24.5		C ₆ H ₅ NO ₂	Nitrobenzene	123.11	122.8	
	Xe	Xeon	131.30	36.1		C ₁₂ H ₁₀	Biphenyl	154.20	131.3	
	H ₂ S	Hydrogen sulfide	34.09	50.6		C ₁₀ H ₈ O	1-Naphthol	144.16	137.7	
	CO ₂	Carbon dioxide	44.01	54.3		C ₆ H ₆ O	Phenol	94.11	141.9	
	NH ₃	Ammonia	17.03	65.5		C ₁₀ H ₈ O	2-Naphthol	144.16	139.1	
	NH ₄ SH	Ammonium hydrosulfide	51.12	96.1		C ₁₀ H ₈	Naphthalene	128.16	146.1	
	SO ₂	Sulfur dioxide	64.07	62.3		C ₇ H ₈ O	Benzyl alcohol	108.13	153.3	
	H ₂ O	Water	18.02	106.6		C ₁₄ H ₁₀	Phenanthrene	178.22	157.8	
	S	Sulfur	32.07	201.5		C ₁₂ H ₁₈	Hexamethylbenzene	162.26	163.2	
						C ₁₄ H ₁₀	Anthracene	178.22	167.5	
	Simple Organics	CH ₄	Methane	16.04		22.0	Linear Amides	C ₃ H ₇ NO	Dimethylformamide	70.10
OCS		Carbonyl sulfide	60.08	46.8	C ₃ H ₇ NO	Methylacetamide		73.10	120.8	
C ₅ H ₁₂		Pentane	72.15	73.6	C ₂ H ₅ NO	Formamide		45.04	129.8	
CS ₂		Carbon disulfide	76.15	74.4	CH ₃ NO	Methylformamide		59.07	130.1	
HCN		Hydrogen cyanide	27.03	80.5	C ₂ H ₅ NO	Acetamide		59.07	153.3	
C ₇ H ₈		Toluene	92.13	87.6	C ₄ H ₉ NO	Dimethylacetamide		87.12	154.9	
C ₅ H ₁₀ O		3-Pentanone	96.21	92.8	C ₄ H ₉ NO	Methylpropanamide		87.12	179.1	
NH ₄ CN		Ammonium cyanide	44.06	93.8	Carboxylic Acids	C ₅ H ₁₀ O ₂		Valeric acid	102.13	133.6
C ₅ H ₁₀ O ₂		Ethyl propanoate	102.13	103.6		C ₆ H ₁₂ O ₂		Caproic acid	116.16	148.4
NH ₄ CO ₂ NH ₂		Ammonium carbonate	78.08	107.4		C ₇ H ₁₄ O ₂		Enanthic acid	130.18	159.1
NH ₄ HCO ₃	Ammonium bicarbonate	79.06	113.3	C ₈ H ₁₆ O ₂		Caprylic acid	144.23	172.4		
Ar·6H ₂ O	Argon clathrate	148.05	28.9	C ₉ H ₁₈ O ₂		Pelargonic acid	158.23	181.1		
N ₂ ·6H ₂ O	Nitrogen clathrate	136.12	30.5	C ₁₀ H ₂₀ O ₂		Capric acid	172.26	185.4		
O ₂ ·6H ₂ O	Oxygen clathrate	140.10	31.9	C ₁₂ H ₂₄ O ₂		Lauric acid	200.31	201.3		
CO ₂ ·7H ₂ O	Carbon dioxide clathrate	170.12	33.4	C ₁₆ H ₃₂ O ₂		Palmitic acid	228.36	221.4		
N ₂ ·7H ₂ O	Nitrogen clathrate	154.13	33.4	C ₁₈ H ₃₆ O ₂	Stearic acid	256.42	224.3			
CH ₄ ·7H ₂ O	Methane clathrate	142.15	41.8	Fullerene	C ₆₀	Fullerene	720.60	465.0		
CO ₂ ·6H ₂ O	Carbon dioxide clathrate	152.12	50.9							
Xe·6H ₂ O	Xeon clathrate	239.40	53.9							
2NH ₃ ·H ₂ O	Ammonia clathrate	191.90	58.4							
Kr·6H ₂ O	Krypton clathrate	49.06	58.6							
NH ₃ ·H ₂ O	Ammonia clathrate	35.05	80.3							

Figure 1. Calculated vacuum evaporation rates as a function of temperature for representative organic and inorganic compounds. The shaded areas show the range of evaporation rates calculated for the compounds shown in the figure legend. With the exception of sulfur, most inorganic volatiles are less volatile than water. Most simple organics and clathrates are also more volatile than water, whereas aromatic hydrocarbons, linear amides and carboxylic acids are less volatile than water. Very large molecules such as Fullerene (not shown on graph) are much less volatile than water.