

Lutetium

Inchi:	InChI=1S/Lu
InchiKey:	OHSVLFRRHMCKCQY-UHFFFAOYSA-N
Formula:	Lu
SMILES:	[Lu]
Mol. weight [g/mol]:	174.97
CAS:	7439-94-3

Physical Properties

Property code	Value	Unit	Source
affp	992.00	kJ/mol	NIST Webbook
basg	970.60	kJ/mol	NIST Webbook
ea	0.34 ± 0.01	eV	NIST Webbook
ie	5.43 ± 0.00	eV	NIST Webbook
ie	5.20 ± 0.50	eV	NIST Webbook
ie	5.30 ± 0.10	eV	NIST Webbook
ie	5.43	eV	NIST Webbook
ie	5.43 ± 0.00	eV	NIST Webbook
ie	5.43	eV	NIST Webbook
ie	5.32 ± 0.05	eV	NIST Webbook
ie	5.41 ± 0.02	eV	NIST Webbook
ie	5.43 ± 0.00	eV	NIST Webbook
ie	5.30 ± 0.30	eV	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.60191e+01
Coeff. B	-4.01165e+04
Coeff. C	-1.56400e+02
Temperature range (K), min.	1873.15
Temperature range (K), max.	3675.15

Sources

Investigation in the variation of Gibbs energy of formation of RE₆UO₁₂ (RE = La, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Tm, Yb, Lu) along the 4f series;
The Yaws Handbook of Vapor Pressure:

<https://www.doi.org/10.1016/j.jct.2019.06.030>

NIST Webbook; <http://webbook.nist.gov/cgi/cbook.cgi?ID=C7439943&Units=SI>

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

Legend

affp:	Proton affinity
basg:	Gas basicity
ea:	Electron affinity
ie:	Ionization energy
pvap:	Vapor pressure

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