

FEATURE VECTOR DISTRIBUTION TABLE

Property	Unit	Range	Categories (In article)	Actual Categories	Lithium - Li Values in array (Original values)
Group Number	–	1,2,....18	18	19	1 (1)
Period Number	–	1,2,....9	9	7	2 (2)
Electronegativity	–	0.5 - 4.0	10	10	0.85 - 1.2 (0.98)
Covalent Radius	pm	25 - 250	10	10	122.5 - 147.5 (123)
Valence electron	–	1,2,.....12	12	12	1 (1)
First Ionisation energy	eV	1.3 - 3.3	10	10	1.5 - 1.7 (1.68)
Electron Affinity	eV	-3 - 3.7	10	10	0.35 - 1.02 (0.6)
Block	–	s, p, d, f	4	4	s (s)
Atomic Volume	cm3/mol	1.5 - 4.3	10	10	2.34 - 2.62 (2.57)

Ionisation Energy and Atomic vol are in Log scale

Feature Vector Array of Lithium :

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[ 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0,
0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0,
1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0 ]
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Group Number

Period Number

Electronegativity

Covalent Radius

Atomic Volume

Valence Electron

First Ionisation Energy

Electron Affinity

Block