

Mining the Cambridge Database for theoretical chemistry. Mi-LJC: A new set of Lennard-Jones-Coulomb atom-atom potentials for the computer simulation of organic condensed matter

Angelo Gavezzotti^{1,2}, Leonardo Lo Presti¹ and Silvia Rizzato¹

¹ Dipartimento di Chimica, Università degli studi di Milano, Via Golgi 19, 20133 Milano

² On permanent leave.

Experimental ΔH_s and lattice energy data for the 377-molecule data set ($\text{kJ}\cdot\text{mol}^{-1}$). “CSD refcode” is the Cambridge Structural Database reference codes. E_{LJC} and E_{CLP} are lattice energies by LJC or CLP functional.

CSD refcode	ΔH_s	E_{LJC}	%Dev	E_{CLP}	%Dev	compound name
ACETAC03	66.4	64.7	2.6	67.4	-1.5	acetic acid
FORMAC01	60.2	56.5	6.3	56.1	6.9	formic acid
FUMAAC01	136.4	119.5	12.4	122.5	10.2	trans-butenedioic acid
GLURAC13	130.6	129.3	1	143.2	-9.6	glutaric acid
HIFKUC	87.1	88.4	-1.5	82.6	5.1	3-furancarboxylic acid
MALIAC13	109.2	107.4	1.7	109.2	0	cis-butenedioic acid maleic acid.
MALNAC16	109.2	107	2.1	123.3	-12.9	malonic acid
MEMALA01	115	118.7	-3.2	125.6	-9.2	methylmalonic acid
OXALAC08	95.2	99.8	-4.8	119.1	-25.1	oxalic acid anhydrous.
PRONAC	72.1	72.3	-0.2	77.6	-7.6	propionic acid
SUCACB18	122	117.1	4	129.5	-6.1	succinic acid
ADIPAC20	144.5	131.6	9	137	5.2	adipic acid
BENZAC20	91	94.9	-4.2	86.2	5.3	benzoic acid
CLBZAC02	110	101.3	7.9	99.2	9.8	2-chlorobenzoic acid
CLBZAP13	105	101.8	3.1	98.6	6.1	4-chlorobenzoic acid
COVJIG01	94.3	97	-2.8	90.2	4.4	3-fluorobenzoic acid
FBENZA02	94	99.2	-5.5	97.6	-3.8	2-fluorobenzoic acid
FURDCA	122.8	109.2	11.1	130.4	-6.1	furan-2,5-dicarboxylic
MCBZAC02	104	102.3	1.6	101.1	2.7	3-chlorobenzoic acid
PFBZAD15	93	91.8	1.3	87.6	5.9	4-fluorobenzoic acid
BENZDC11	142	134	5.7	133.7	5.8	isophthalic acid
OTOLIC02	96	97.8	-1.8	94.5	1.6	o-toluic acid
PHTHAC06	130	134.6	-3.5	138.4	-6.5	phthalic acid
CSD name	ΔH_s	E_{LJC}	D%	E_{CLP}	D%	compound name
PIMELA15	140	142.6	-1.8	155	-10.7	heptanedioic acid
PTOLIC01	99	93.3	5.7	93.9	5.2	p-toluic acid

TEPHTH14	146	140	4.1	132.1	9.5	terephthalic acid
DMBNZA11	99	99.1	-0.1	100.2	-1.2	2,6-dimethylbenzoic acid
DMBZAC01	105	100.9	3.9	99.9	4.9	2,3-dimethylbenzoic acid
RUVQAA	110	105.7	3.9	105.7	4	2,4,5-trimethylbenzoic
WIZJUL	104	102	1.9	105.1	-1.1	2,4-dimethylbenzoic acid
CINMAC	107	101.8	4.9	96.4	9.9	trans cinnamic acid
TMBZAC01	104	97.9	5.9	107.3	-3.2	2,4,6-trimethylbenzoic
TMEBZA	111	104.2	6.1	104	6.3	3,4,5-trimethylbenzoic
NAPACA12	112	113.8	-1.6	120.2	-7.3	1-naphthaleneacetic
NAPOAC01	115.4	108.3	6.2	108.5	6	1-naphthoic acid
PEYGEF01	124	122.9	0.9	131.3	-5.9	2-naphthaleneacetic
NAPHAC02	118.4	112.5	5	108.2	8.6	2-naphthoic acid
ISENUP	113	105.6	6.6	110.3	2.4	octanoic
SUBRAC12	148	149.5	-1	152	-2.7	octanedioic
QQQFDJ01	122.1	135.5	-11	136.5	-11.8	9-anthracenecarboxylic
DCLPHM01	87	88.1	-1.3	100.1	-15	3,4-dichlorophenol
DNOPHL02	104.3	103.3	0.9	115.1	-10.3	2,4-dinitrophenol
DNPHOL02	112.3	105.5	6.1	122.9	-9.4	2,6-dinitrophenol
LETFEV	73	78.5	-7.5	91.7	-25.6	3,5-diFluorophenol
NITPOL08	95	94.5	0.5	94	1	4-nitrophenol
NTCPOL01	88	87.2	0.9	90.5	-2.9	4-chloro-2-nitrophenol
ONITPH	73	77	-5.4	87.8	-20.3	2-nitrophenol
PBRPOL	85	84.4	0.7	90.3	-6.2	4-bromophenol
PCPHOL01	93.2	107.9	-15.8	117.1	-25.7	pentachlorophenol
QQQBNG01	74	78.2	-5.7	75.5	-2	4-Fluorophenol
SILGOK	82.7	83.9	-1.4	92.6	-11.9	2,4,6-trichlorophenol
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
TEMWUD	74.5	79.8	-7.2	95.7	-28.5	2-nitro-1,3-dihydroxybenzene
UCAYED01	67.2	79.7	-18.6	88.9	-32.4	pentaFluorophenol
AMPHOL01	108	103.2	4.5	111.9	-3.6	4-aminophenol
AMPHOM02	101	96.9	4.1	99.9	1.1	2-aminophenol
BESKAL	130	123.4	5.1	151	-16.1	2,5-dihydroxybenzoic acid
BIDLOP02	123	123	0	121	1.6	3-hydroxybenzoic acid
CACDAM01	111	112	-0.9	135.2	-21.8	2,3-dihydroxybenzoic acid
CATCOL16	85	96.1	-13	114.1	-34.3	1,2-dihydroxybenzene
FECCOF01	110	125.6	-14.2	132.4	-20.4	1,6-hexanediol
HYQUIN08	100.4	111.2	-10.7	108.3	-7.8	1,4-dihydroxybenzene
LEZJAB01	109	115.2	-5.7	132.4	-21.5	2,6-dihydroxybenzoic acid
MAMPOL	104	95.1	8.5	104.7	-0.7	3-aminophenol
PHBALD11	101	90.7	10.2	107.6	-6.5	4-hydroxybenzaldehyde
PHGLOL01	134	130.7	2.4	160.8	-20	1,3,5-trihydroxybenzene
RESORA03	93	105.7	-13.6	113.5	-22	1,3-dihydroxybenzene
SALIAC19	97	95.4	1.6	108	-11.3	2-hydroxybenzoic acid
XAYCIJ	100	88.2	11.8	110.6	-10.6	3-hydroxybenzaldehyde

YELRIR	89	89.6	-0.7	95.1	-6.9	2-methyl-3-hydroxypyridine
ZZZEU04	125	129.5	-3.6	145.9	-16.7	2,4-dihydroxybenzoic acid
DIMEDO02	100	103.2	-3.2	122.8	-22.8	5,5-dimethyl-1,3-cyclohexanedione
DIMPHE12	84.1	85.1	-1.1	102.3	-21.7	2,3-dimethylphenol
DMEPOL10	75.5	77.5	-2.7	90.1	-19.3	2,6-dimethylphenol
DMPHOL11	85.1	83	2.5	91.8	-7.8	2,5-dimethylphenol
HACTPH16	96.7	100.1	-3.4	123.4	-27.6	4-hydroxyacetophenone
SALMID02	101	98.8	2.1	110.6	-9.5	2-hydroxybenzamide
VIDMAX	125	124.7	0.2	142.1	-13.7	4-hydroxybenzamide
FAMDIG	112	93.6	16.4	104.2	6.9	5-chloro-8-hydroxyquinoline
FESNOG02	172.3	167	3.1	193	-12	3,4-dihydroxycinnamic acid caffeic acid
HEGFAB	116	116.8	-0.7	137.1	-18.2	1,3-dihydroxynaphthalene
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
HXQUIN11	89	84.5	5	98.7	-10.8	8-hydroxyquinoline
IPMEPL	91	85.8	5.8	95.6	-5.1	2-isopropyl-5-methylphenol thymol
NAPHOL01	90	93.5	-3.9	103.3	-14.8	1-naphthol
XAXSIY	90	85.3	5.2	98.4	-9.3	2,4,6-trimethylphenol
BOPSAA10	110	114.9	-4.4	128.9	-17.2	4-hydroxybiphenyl
DOHDPH02	143	145.2	-1.6	169.9	-18.8	4,4'-dihydroxybiphenyl
NUTSUQ	114	120.8	-5.9	122.8	-7.7	2,2'-dihydroxybiphenyl
ACEMID05	79	79.3	-0.3	78.4	0.8	acetamide
APYFEB01	113	108.8	3.7	88.3	21.9	tetrahydro-2-pyrimidone
ARCLAM01	82.6	78.6	4.9	76	8	acrylamide
CROTAM	81.4	77.2	5.3	83	-2	trans 2-butenic acid amide
DIACHZ	104.1	98.5	5.3	96.5	7.3	1,2-diacetylhydrazine
DIKPIPO3	106.6	123.8	-16.1	115.3	-8.2	2,5-piperazinedione
DIXTAF01	88	82.3	6.5	90.9	-3.3	2,2-dimethylpropanamide
FEPGEM	75	75.6	-0.7	87.8	-17	methyl carbamate
FORMAM02	72	66.2	8.2	66.3	8	formamide
GLUTIM	94	88	6.3	102.8	-9.3	glutarimide
IBURAM	86	79.1	8	81.1	5.7	2-methylpropanamide
KIKREC	101	108.2	-7.1	112.9	-11.7	N-propylurea
MALOAM02	126	129.1	-2.4	143.5	-13.9	malonamide
MEUREA01	97.4	95.2	2.3	94.5	3	N-methylurea
NIHJU04	89	80.5	9.6	86.8	2.5	1,3-dimethylurea
PYZIN23	89.3	82.6	7.5	94	-5.3	pyrazine carboxamide
QQQGEM01	103	103.5	-0.4	119.8	-16.2	acetylurea
SUCCIN09	86.2	82.5	4.4	92.3	-7	succinimide
TFACAM	79	74.6	5.6	72.2	8.6	triFluoroacetamide
UREAXX25	97.6	94.2	3.5	102.2	-4.6	urea
WIFKEB02	95	91.2	4.1	90.3	5	1,1-dimethylurea
YAQLAE	97	98.2	-1.2	104	-7.2	N-ethylurea
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
YAQLEI	104.4	109.5	-4.8	118.2	-13.1	N-butylurea

ZZZKDQ01	85.3	87.8	-3	87.4	-2.5	butyramide
ZZZKJQ01	90	94.5	-4.9	98.7	-9.7	pentanamide
BZAMID12	100.2	93.6	6.7	99.2	1	benzamide
BZOXZO	98	101.6	-3.6	90.6	7.6	2-benzoxazolinone
CAPLAC	85.2	82.8	2.9	81.2	4.8	epsilon-caprolactam
EHOWIH	115	104.2	9.4	106.5	7.4	4-pyridinecarboxamide
NICOAM06	120	104.1	13.2	100.5	16.2	3-pyridinecarboxamide
PICAMD06	93.4	91	2.6	99.8	-6.8	2-pyridinecarboxamide
ACANIL06	87	98.2	-12.9	109.9	-26.4	acetanilide
HQOXAL01	120.9	104.4	13.6	95.2	21.2	2-hydroxyquinoxaline
PHALIM04	106	95.5	9.9	92.5	12.8	phthalimide
PHUREA02	138.2	121	12.4	128.9	6.7	monophenylurea
WIGYIV	107	100.4	6.2	91.1	14.8	1-(2H)-phthalazinone
REZRIY	97.6	97	0.6	106.8	-9.5	N- 2-methylphenyl acetamide
BRANIL	100	91.3	8.7	95.6	4.4	2,4,6-tribromoaniline
BRNIBZ	87	86.1	1.1	75.2	13.5	3-bromo-1-nitrobenzene
PBRANL01	79	73.3	7.2	74.7	5.5	4-bromoaniline
ULEBOD	87	87.1	-0.1	78.6	9.6	4-bromo-1-nitrobenzene
VOQYUW	82	75.8	7.6	69.7	15	2,5-dibromopyridine
YAQZUM	85	87.7	-3.2	75.6	11.1	2-bromo-1-nitrobenzene
BRBZAC01	109	110.7	-1.6	99.8	8.4	2-bromobenzoic acid
BRBZAP01	107	106.5	0.5	94.8	11.4	4-bromobenzoic acid
CAJWEQ01	88	82.5	6.2	82.5	6.3	2,4-dibromoaniline
QQQFDS02	102	104	-2	109.6	-7.5	9-bromoanthracene
FIZZOD	95	94	1.1	93.1	2.1	5-methyltetrazole
FULPIM	88.4	77.3	12.5	84.8	4.1	2-methylimidazole
IMAZOL13	83	71.8	13.5	70.5	15.1	imidazole
ITIZOA	72.1	74.5	-3.3	69.4	3.8	piperazine
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
TETZOL02	89	85.1	4.4	78.7	11.6	tetrazole
TRAZOL04	82	76	7.4	77.2	5.9	1,2,4-triazole
BZDMAZ04	100	96.4	3.6	97.4	2.6	benzimidazole
ZBCNON	58	65.8	-13.4	61.3	-5.8	3-azabicyclo 3.2.2nonane
CRBZOL03	101	99.8	1.2	104.2	-3.1	carbazole
KEMDOW	186	186	0	208.3	-12	guanine
DMANAP10	94.7	92	2.9	102.8	-8.5	1,8-N,N,N'N'-tetramethyldiaminonaphthalene
VUFZUR01	119.2	119.8	-0.4	131.7	-10.4	4-(N,N-dimethylamino azobenzene
BOTYIT	77	75.2	2.3	79.6	-3.4	2,4-dichloropyrimidine
DCPYAZ01	70	67.1	4.2	71.6	-2.2	2,6-dichloropyrazine
HAMGOT	89.4	88.2	1.4	95.1	-6.4	1,2,4-triazolo 1,5-apyrimidine
TELPOP	87	79.3	8.9	68.1	21.8	1-methyltetrazole
TRIZIN01	57	59.7	-4.6	65.3	-14.5	1,3,5-triazine
HXMTAM23	80	89.5	-11.9	71.5	10.6	1,3,5,7-tetraazatricyclo 3.3.1.13,7decane
ZZZIVG02	61.3	59.4	3	64.9	-5.9	4-methylpyridine

ZZZKAO01	61	59.1	3.1	64.7	-5.9	3-methylpyridine
DAZNAP	82	84.2	-2.6	86.4	-5.3	phthalazine
HEYJOK01	68	76.7	-12.8	74.4	-9.3	quinoxaline 1,4
MPYRAZO2	95	78.1	17.8	103.6	-9.1	tetramethylpyrazine
BIPYRL04	80	87.2	-9	97.2	-21.5	2,2 -bipyridine
CHLQUI10	84	86.3	-2.8	95.8	-14.1	2-chloroquinoline
CLQUIN	81	82.3	-1.6	84.2	-4	6-chloroquinoline
EYIRIN	102	104.7	-2.7	102.8	-0.8	1-benzylimidazole
KEYNOR	87.7	84.6	3.5	103.3	-17.8	2,3-dimethylquinoxaline
PHENAZ11	96	94.3	1.8	101.8	-6.1	phenazine
PILFOG	85	85.8	-1	94.9	-11.7	2,6-dimethylquinoline
NAMKAN01	100	102.5	-2.5	119.5	-19.5	4,4' -dimethyl-2-2'bipyridyl
CLBENQ	68.6	74.2	-8.3	82.3	-20	chlorobenzoquinone
DMEOXA06	75.3	81.4	-8.1	81	-7.6	dimethyl oxalate
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
ETHCAR	77	71.5	7.2	66.3	13.9	ethylene carbonate
LIJFUG	86	86.1	-0.2	102.6	-19.3	glutaric anhydride
MLEICA01	86.4	69.7	19.3	88.6	-2.5	maleic anhydride
NIKVUZ	69	57.1	17.3	80.9	-17.2	cyclobutane-1,2-dione
PTOXEC	88	91.3	-3.7	90.6	-3	1,3,5,7,9-pentoxecane
TOXOCN	80	80.9	-1.1	97.4	-21.7	1,3,5,7-tetroxane
TROXAN	56	63.3	-12.9	70.9	-26.5	1,3,5-trioxane
BNZQUI03	68.8	62.8	8.6	68	1.2	1,4-benzoquinone
CYHEX001	84	78.2	6.9	95.5	-13.6	1,4-cyclohexanedione
GOCWEA	82	91.7	-11.8	80.4	2	trans-1,3,5,7-tetraoxadecalin
POKKAB	95	99.1	-4.3	109.6	-15.4	cis-1,3,5,7-tetraoxadecalin
ZZZDRQ01	85	91.4	-7.5	91.9	-8.2	dimethyl fumarate
BZCBUO	90.3	83.5	7.5	91.1	-0.9	benzocyclobutenedione
DMKETD02	71	69.1	2.7	82.1	-15.7	2,2,4,4-tetramethyl-1,3-cyclobutanedione
MOXBEN01	84	79.1	5.8	85.1	-1.3	1,4-dimethoxybenzene
PHTHAO	88.6	89.8	-1.3	95.5	-7.8	phthalic anhydride
COUMAR02	92.2	87.9	4.7	94.2	-2.1	coumarin
DMTPAL	105.1	110.3	-5	110.2	-4.9	dimethylthyl terephthalate
INDDON	97	84.8	12.6	92.6	4.5	1,3-indandione
NAPHQU01	91	88.9	2.3	96.2	-5.7	1,4-naphthoquinone
NBORAN02	97	96.7	0.3	103.6	-6.8	endo-5-norbornene-2,3-dicarboxylic anhydride
PYMDAN	122	115.9	5	149.5	-22.6	1,2,4,5-benzenetetracarboxylic acid anhydride
TMOXBZ10	100	89.2	10.8	93.4	6.6	1,3,5-trimethoxybenzene
BPHENO10	93	92.4	0.7	96	-3.2	benzophenone
BZDIOX01	92	92.9	-0.9	99.3	-7.8	dibenzo b,e 1,4 dioxin
CONYAH	93.1	95.2	-2.2	100	-7.4	xanthene
DBZFUR02	84	88.7	-5.5	90	-7.1	dibenzofuran
PARPEE	95	97.7	-2.8	104.7	-10.3	alpha naphthyl acetate

PHBENZ01	98	103.7	-5.8	107.7	-9.9	phenyl benzoate
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
RAFFIO01	82	86.2	-5.2	92.2	-12.4	diphenyl ether
ANTQUO08	111	113.1	-1.9	113.2	-2	9,10-anthraquinone
SAZQJT	101	103.1	-2.1	107.2	-6.2	2-fluorencarboxaldehyde
HEGSAN01	117	113.3	3.1	92	21.4	1,4-dimethylcubane dicarboxylate
DBEZLM01	115	109	5.2	130.1	-13.1	dibenzoylmethane
ANTHAL	101	104	-3.1	112.1	-11.1	9-anthraldehyde
AHCHEX01	94.2	96.9	-2.9	90.6	3.9	alfa-hexachlorocyclohexane
HCCYHB	105.2	108.4	-3	105.8	-0.5	beta-hexachlorocyclohexane
DCLBEN03	65	68.7	-5.7	71.3	-9.6	1,4-dichlorobenzene
HCLBNZ14	97	97.3	-0.3	93.6	3.5	hexachlorobenzene
PNCLBZ	87	86.1	1.1	85.7	1.5	pentachlorobenzene
TCHLBZ03	72.9	70.9	2.8	77.4	-6.1	1,3,5-trichlorobenzene
DCLBIP	96	92.4	3.8	89.2	7.1	2,2'-dichlorobiphenyl
DCLBPH	150	140.1	6.6	143.1	4.6	decachlorobiphenyl fus+vap
FUHDAN01	123.9	121.5	2	125.7	-1.4	3,3',4,4'-tetrachlorobiphenyl
HCLBPH	102.7	107.5	-4.7	110.6	-7.6	2,2',4,4',6,6'-hexachlorobiphenyl
TCBZFU	124.5	121.2	2.6	122.5	1.6	2,3,7,8-tetrachlorodibenzofuran
TEKQJ	100.6	113.2	-12.5	113.1	-12.4	2,2',5,5'-tetrachlorobiphenyl
DCLANT10	114	109.7	3.8	121	-6.2	9,10-dichloroanthracene
CLBENQ	68.6	74.2	-8.3	82.3	-20	chlorobenzoquinone
DCLBQN01	70	72.3	-3.3	95.7	-36.8	2,6-dichloro-1,4-benzoquinone
BIMVEZ	100	99.3	0.7	98.2	1.8	2-chlorobenzophenone
DCBDOX10	109.7	109.7	0	113.8	-3.7	2,8-dichlorodibenzo b,e 1,4 dioxin
DCBZDX20	111.2	119.6	-7.6	124.7	-12.1	2,7-dichlorodibenzo b,e 1,4 dioxin
FELSEU	112.9	124.7	-10.5	130.9	-15.9	1,2,3,4-tetrachlorodibenzo b,e 1,4 dioxin
OCDBDO10	150.7	160.7	-6.7	153.1	-1.6	octachlorodibenzo b,e 1,4 dioxin
SESHED	98	104.3	-6.4	108	-10.2	2-chlorodibenzo b,e 1,4 dioxin
BISJIW	70.6	65.6	7.2	68.4	3.2	fumaronitrile
CAACTY	41.2	30	27.3	30.2	26.7	cianoacetylene
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
CYAPYR	75	68	9.4	67.9	9.5	4-cyanopyridine
CYNGEN	31.2	35.8	-14.6	49.8	-59.4	cyanogen
DCYANM	43.4	47.3	-8.8	63.3	-45.7	dicyanoacetylene
MALONT	79	61.4	22.3	80.7	-2.1	malononitrile
MUBZOY	71	74.5	-4.9	78.2	-10.1	2-cyanopyridine
MUBZUE	72	70.6	2	74.9	-4	3-cyanopyridine
QOPBED	70	72.8	-4	97.4	-39.1	succinonitrile
TCYETY11	83.5	78.6	5.8	142.9	-71.2	tetracyanoethylene
TCYMET	61	66.2	-8.6	134.7	-120.9	tetracyanomethane
BISJAO02	81	83.6	-3.2	98.2	-21.2	tetramethylsuccinonitrile
OBIZEE	90	87.9	2.4	94.3	-4.8	1,3-dicyanobenzene
TEPNIT11	90	89.6	0.4	94.8	-5.4	1,4-dicyanobenzene

YUYPUD02	87	85.2	2	95.9	-10.3	1,2-dicyanobenzene
JIBDON	84	76.3	9.2	84.2	-0.3	2,6-dimethylbenzonitrile
SUZJOB	94	95.5	-1.6	104.3	-10.9	2-cyanoquinoline
TCYQME03	120.6	115	4.7	148.6	-23.2	7,7,8,8-tetracyanoquinodimethane
XOGJAG	53.6	63.4	-18.3	57.9	-8	trifluoromethylbenzene
PUGPIQ	95.3	92.1	3.4	91.2	4.4	2,2'-difluorobiphenyl
ZZAOS02	95	93.5	1.7	90.9	4.4	4,4'-difluorobiphenyl
DUCKOB03	32.2	32.6	-1.4	39.6	-22.9	butane
JAYDUI	24.8	26.9	-8.4	35.5	-43	propane
PENTAN01	38.9	41.9	-7.6	50.8	-30.6	pentane
QQQCIS01	25.7	27	-4.8	30.3	-17.7	cyclopropane
ZZZVYE01	39.5	41.7	-5.6	45.9	-16.1	cyclopentane
ZZZWEO02	32.9	33.9	-3	35.5	-7.9	cyclobutane
BENZEN18	44.6	44.9	-0.5	48.4	-8.4	benzene
HEXANE01	48.6	50.6	-4.1	59.7	-22.8	hexane
HEPTAN02	55.7	57.4	-3	66.8	-20	heptane
ZZZITY02	59.4	64	-7.9	71.8	-20.9	1,4-dimethylbenzene
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
BULVAL03	72	70.2	2.4	72.4	-0.6	bullvalene
DURENE	73	68.7	5.9	80.4	-10.1	1,2,4,5-tetramethylbenzene
NAPHTA10	73	70	4.2	77.8	-6.6	naphthalene
BIPHEN04	82	84.5	-3.1	89.5	-9.1	biphenyl
DMNPTL02	83	82.9	0.2	93.2	-12.2	2,6-dimethylnaphthalene
FLUREN01	85	85	0	87.8	-3.3	fluorene
ZZMKSO1	86	89.1	-3.6	93.8	-9.1	diphenylmethane
ANTCEN14	97	95	2.1	107.2	-10.4	anthracene
PHENAN08	92	89.6	2.6	100	-8.7	phenanthrene
COPMUR	75	76	-1.3	88.6	-18.2	pentamethylbenzene
HMBENZ17	84	79.4	5.5	92.1	-9.6	hexamethylbenzene
BISDOY	83.3	91.3	-9.6	94.7	-13.7	9-methylfluorene
DITBOX01	93	93	0	94.3	-1.4	9,10-dihydroanthracene
MANTHR14	101	94.3	6.6	103.6	-2.6	9-methylantracene
PYRENE02	101	95.2	5.8	104.2	-3.2	pyrene
TOKKIN	91.3	91.5	-0.3	91.9	-0.7	1-methylfluorene
BZPHAN01	106	110.4	-4.1	122.6	-15.6	benzo c phenanthrene
CLNIBZ01	82	79.6	2.9	75.6	7.8	1-chloro-3-nitrobenzene
CLNOBE02	103	119.3	-15.9	119.3	-15.8	1-chloro-2,4,6-trinitrobenzene
FINBIP	72	76.6	-6.3	73.1	-1.5	1,1,1-trinitroethane
SETVIX	81	79.8	1.5	74.6	7.8	1-chloro-2-nitrobenzene
BECEJY	90	100.1	-11.2	110.4	-22.6	2,3-dinitro-2,3-dimethylbutane
DNBENZ15	85	95.1	-11.9	87.1	-2.4	1,3-dinitrobenzene
DNITBZ11	95	101.8	-7.2	90	5.3	1,4-dinitrobenzene
NITOLU01	77	77.8	-1	81.4	-5.7	4-nitrotoluene
UCOVAL	96	95.2	0.8	88.9	7.4	1-chloromethyl-2-nitrobenzene

ZZZFYW02	93	101.1	-8.8	93.9	-1	1,2-dinitrobenzene
ZZZQSC02	99	102.4	-3.4	93	6.1	2,6-dinitrotoluene
TNPHNT	121.8	121.9	-0.1	131.7	-8.1	2,4,6-trinitrophenetole
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
NTRANT01	114.6	112.4	2	118.1	-3	9-nitroanthracene
BDTOLE11	94.9	100.7	-6.1	99.2	-4.5	tetrathiafulvene
BETHAZ01	71	82	-15.5	114.5	-61.3	2,1,3-benzothiadiazole
DITHAN03	71	77.4	-9	64.2	9.6	1,4-dithiane
DMSULO04	77	87.5	-13.6	84.3	-9.5	dimethyl sulfone
DTOLTO	82	81.5	0.6	78.1	4.8	1,3-dithiolan-2-thione
IXANOK	80	79.3	0.9	80.8	-1	1,3-dithiolan-2-one
OFIZEK	84	87	-3.6	81.4	3	tetramethylthiourea
OWEKEH	73	76.8	-5.2	80.3	-10	tetrahydro-4H-thiopyran-4-one
PUVVUZ	89.2	94.1	-5.5	85.3	4.4	1,3-dithian-2-thione
THIOUR16	108.6	84.4	22.3	69.8	35.7	thiourea
TPENAC02	97.4	95.4	2.1	91.8	5.8	2-thiophene carboxylic acid
TRITAN10	94	86.6	7.9	72.3	23.2	1,3,5-trithiane
YIFZAP	115	113.7	1.1	104.6	9	benzenesulfonamide
DTENYL02	85.6	88.5	-3.4	108.6	-26.8	2,2-bithiophene
MPSUFO01	92	96.5	-4.9	87	5.4	MEphenylsulfone
FABPON11	123	114.2	7.1	126.3	-2.7	5-phenyl-1,2-dithiole-3-thione
PRYLTS	96	111.6	-16.2	110.9	-15.5	p-tolyl propenylsulfone
DBZTHP	96	96.9	-0.9	103.8	-8.1	dibenzothiophene
DPSULO	106	112.2	-5.8	104.1	1.7	diphenyl sulfone
PHESA01	115	106.8	7.1	106.8	7.1	phenothiazine
THIANT03	100	107.6	-7.6	100.7	-0.6	thianthrene
TOXANT	101	100.8	0.2	102.7	-1.7	thioxanthene
MOYGUC01	62.2	77.6	-24.8	74.2	-19.3	thiocamphor
TUXFIC02	125	142.7	-14.1	140	-12	dibenzyl sulfone
AMIPYR	83	74.7	10	76.3	8.1	3-aminopyridine
AMMTAZ01	91.8	93.8	-2.2	97.9	-6.6	2-methyl-5-aminotetrazole
AMPYRD	78	71.6	8.3	83	-6.4	2-aminopyridine
AMPYRE01	88	83.8	4.8	90.1	-2.4	4-aminopyridine
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
CAGPUV01	85	84.8	0.2	79.5	6.5	3,4-dichloro-1-nitrobenzene
CARDOO	109	98.4	9.7	107.6	1.3	4,5-dichloro-2-nitroaniline
CLNOAN	109	101.2	7.2	109.6	-0.6	2,6-dichloro-4-nitroaniline
CUVJUY	101.9	99.3	2.6	102.5	-0.6	1,4-diNOpiperazine
DATNBZ01	145	135.2	6.7	171.3	-18.2	1,3-diamino-2,4,6-trinitrobenzene
DCHLAN01	83	79.8	3.9	87.7	-5.7	2,5-dichloroaniline
GETVEH	74	77.4	-4.7	79.4	-7.3	2,3,5-trichloropyridine
HIBWEU	83	81.8	1.5	82	1.2	3,5-dichloro-1-nitrobenzene
KOMYEQ01	80	82.6	-3.3	96.2	-20.2	N-methylsuccinimide
LETNAZ01	103	97.5	5.3	99.9	3	3,5-dimethyl-4-NOpazole

NANILI31	101	98.6	2.4	104.8	-3.8	4-nitroaniline
NICOAC02	115	102.2	11.1	92.4	19.7	3-pyridinecarboxylic
PICANO04	95.8	93.9	2	96.9	-1.1	pyridine-2-carboxylic acidNoxide
RAKSIG	151.7	147.8	2.6	142.6	6	6-mercaptapurine
UCECAG02	115	115.3	-0.3	118.9	-3.4	2-chloro-4,6-dinitroaniline
WEMDAT	82	74.1	9.7	81.2	0.9	2,3-dichloroaniline
WEMDEX	74	71.9	2.9	79.6	-7.5	2,6-dichloroaniline
WEMDIB	85	77.4	8.9	84.3	0.8	2,4-dichloroaniline
XAGWIM02	100.2	101.7	-1.4	99.1	1.2	pyrrole-2-carboxylic acid
YOVCAO	100	98.5	1.5	106.2	-6.2	2-chloro-5-nitroaniline
ZZZEKW02	87	82.4	5.3	77.5	11	2,5-dichloro-1-nitrobenzene
AMBACO08	110	96.4	12.3	100.4	8.8	2-aminobenzoic acid
BEOXAZ	65	75.2	-15.6	64.5	0.8	benzofurazan
BIPJUF	135	134.9	0.1	121.5	10	2,4-dinitrobenzoic acid
CLANIC06	86	73.1	15	80.8	6	4-chloroaniline
MEADEN05	124	127.8	-3	142.3	-14.7	9-methyladenine
NBZOAC12	120	118.8	1	110.9	7.6	4-nitrobenzoic acid
NBZOA004	119	115.8	2.7	113.4	4.7	2-nitrobenzoic acid
PNBZNT	91	92.7	-1.9	90.8	0.2	4-nitrobenzotrile
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
RAJGUG	89	70.6	20.7	69.8	21.5	2-methylpyridine Noxide
RICFEP01	81	78.6	3	86.4	-6.7	2-acetylpyrrole
TNIOAN02	125.2	129.1	-3.1	143.4	-14.5	2,4,6-trinitroaniline
AMACPH01	93.3	98.8	-5.9	113.3	-21.5	4-aminoacetophenone
AMBNAC12	116	116.2	-0.2	108.4	6.6	4-aminobenzoic acid
AMEBAC	107	103.9	2.9	116.6	-9	2-amino-3-methylbenzoic acid
ANISIC04	111	109.3	1.6	105.9	4.6	4-methoxybenzoic acid
DIMNAN01	102	105.9	-3.8	116.2	-13.9	N,N-dimethyl-4-nitroaniline
DMADEN11	117	109.7	6.3	119.4	-2	N,N-dimethyladenine
FUFBOX	107	108.8	-1.7	108.1	-1	2-methoxybenzoic acid
MBNZAM10	83.2	88.6	-6.4	89.1	-7	N-methylbenzamide
MNTDMA01	93	96.5	-3.8	98.3	-5.7	3-nitro-N,N-dimethylaniline
MODYAG01	138.2	122	11.7	134.9	2.4	4-aminophthalimide
DMOXB01	122	128.8	-5.6	133.5	-9.4	2,6-dimethoxybenzoic acid
DMXBZA01	130	117	10	117.6	9.6	3,4-dimethoxybenzoic acid
HEKMOZ	127	123	3.1	121.3	4.5	3,5-dimethoxybenzoic acid
ISUQUI	123	126.2	-2.6	120.4	2.1	2,4-dimethoxybenzoic acid
ISURAP	116	109.9	5.3	119.5	-3	2,5-dimethoxybenzoic acid
NONMEI	93	83.4	10.4	96.6	-3.8	8-aminoquinoline
ODOTOQ	93	84.4	9.2	86.8	6.6	N,N-dimethylbenzamide
PICGAJ	109	109.2	-0.2	126.9	-16.4	3-amino-1-phenyl-but-2-enone
SECQEY	104	96.3	7.4	101.1	2.7	3-aminoquinoline
UPAJIF	107	104.5	2.3	102.1	4.6	8-nitroquinoline
VAKJUM	124	105	15.3	109.1	12	2,3-dimethylquinoxaline 1,4dioxide

ZZZFLM01	129	117.5	8.9	116.6	9.6	trans-2-methoxycinnamic
ZZZPRC03	106	88.3	16.7	100.6	5.1	1-methyl-1H-indole-2,3-dione
CINMAC	107	101.8	4.9	96.4	9.9	trans cinnamic acid
MXCINN02	134	117.2	12.5	113.3	15.4	trans-4-methoxycinnamic
OVERAT01	117	121.7	-4	120.2	-2.8	2,3-dimethoxybenzoic acid
CSD name	ΔH_s	E_{LIC}	D%	E_{CLP}	D%	compound name
PEXBZA	123	117.5	4.5	112.9	8.2	4-ethoxybenzoic acid
ZZZNRU02	124	118.6	4.4	116.2	6.3	trans-3-methoxycinnamic
HIBXOF	135	126.6	6.2	140	-3.7	acridone
DMPIPA	80	80.9	-1.2	91.3	-14.2	2-methyl-2-piperidinopropionitrile
EACDRO01	117	117	0	133	-13.7	10-ethylacridin-9(10H)-one
NMACRO11	105	118.4	-12.8	126.5	-20.5	10-methylacridin-9 10H -one
FEXBOZ	87	89.7	-3.1	105.6	-21.4	benzylidene t-Bu amine Noxide