Paper where functions presented:

Baskes, M.I., *Modified embedded-atom potentials for cubic materials and impurities.* Physical Review B (Condensed Matter), 1992. 46(5): p. 2727-42.

Papers that use these functions for pure Si:

Improved modified embedded-atom method potentials for gold and silicon
Ryu, S. ; Weinberger, C.R. ; Baskes, M.I. ; Cai, W.
Modelling and Simulation in Materials Science and Engineering (2009) Vol.17, iss.7 075008

Swadener, J.G., M.I. Baskes, and M. Nastasi, *Stress-induced platelet formation in silicon: A molecular dynamics study.* Physical Review B, 2005. 72(20): p. 201202. (Slightly modified parameters)

Molecular dynamics simulation of silicon sputtering: Sensitivity to the choice of potential
Thijsse, B.J. ; Klaver, T.P.C. ; Haddeman, E.F.C.
Applied Surface Science (Jun 15 2004) Vol.231-232, p.29-38

Macroscopic measure of the cohesive length scale: fracture of notched single-crystal silicon
Bailey, N.P. ; Sethna, J.P.
Physical Review B (Condensed Matter and Materials Physics) (15 Nov. 2003) vol.68, no.20, p.205204-1-8

A modified embedded atom method study of the high pressure phases of silicon
Badis, N ; Feraoun, H ; Aourag, H ; Certier, M
MATERIALS CHEMISTRY AND PHYSICS (MAY 26 2003) Vol.80, iss.2, p.405-40

Swadener, J.G., M.I. Baskes, and M. Nastasi, *Molecular dynamics simulation of brittle fracture in silicon.* Physical Review Letters, 2002. 89(8): p. 085503-1.

Relationship between the modified embedded-atom method and Stillinger-Weber potentials in calculating the structure of silicon
Thijsse, B.J.
Physical Review B (Condensed Matter and Materials Physics) (15 May 2002) vol.65, no.19, p.195207/1-5

Baskes, M.I., *Calculation of the behaviour of Si ad-dimers on Si(001).* Modelling and Simulation in Materials Science and Engineering, 1997. 5(2): p. 149-58.

COMPARISON OF SEMIEMPIRICAL POTENTIAL FUNCTIONS FOR SILICON AND GERMANIUM
COOK, SJ ; CLANCY, P
PHYSICAL REVIEW B (APR 1 1993) Vol.47, iss.13, p.7686-7699

MEAM Parameters (eV, Å):

Reference Structure	E_c	a	α	A	β_0	β_1	β_2	β_3	t_1	t_2	t_3	C_{max}	C_{min}	r_{cut}
Diamond Cubic	4.63	5.431	4.87	1.0	4.40	5.5	5.5	5.5	3.13	4.47	−1.80	2.8	2.0	4.3

f-partial electron density was not corrected as in Eq. 8d in 1992 PRB (legend=0 (DYNAMO), augt1=1 (LAMMPS))

Test results using DYNAMO:

				MEAM	
Diamond cubic	-4.629999993	potential	energy		eV/atom
	20.02393325	volume			$Å^3$
	10.86199973	x	period	2.352	NN distance (Å)
				5.431	a (Å)
0.001 uniform expansion	-4.629945268	potential	energy	97	Bulk modulus (GPa)
0.001 uniform compression	-4.629944909	potential	energy		
c_44 0.001 shear	-4.62998088	potential	energy	76	Shear modulus (GPa)
(c_11-c_12)/2 0.001 shear	-4.629987591	potential	energy	50	Shear modulus (GPa)
(100) surface	-4.228991933	potential	energy	1740	Surface energy (mJ/m^2)
64 atoms	10.862	y	period		Y=Z={100}
(110) surface	-4.323324646	potential	energy	1412	Surface energy (mJ/m^2)
72 atoms	11.520890495	y	period		Y={110}
	10.861999726	z	period		Z={100}
(111) surface	-4.47115444	potential	energy	1194	Surface energy (mJ/m^2)
144 atoms	11.52089024	y	period		Y={110}
	13.30317783	z	period		Z={112}
0,0,2.217 displacement	-4.323938545	potential	energy	15.37	SF energy (mJ/m^2)
0,-1.920,1.109 displacement	-4.321851694	potential	energy	15.59	SF energy (mJ/m^2)
Vacancy	-4.577182244	potential	energy	3.33	Vacancy formation energy
MD 5 ps	299.9101	average	T		K
64 atoms	-53.49453	average	P		bar
	20.26985	average	V		$Å^3$
	-4.587896	average	potential	0.156	Specific heat (meV/atom/K)

					Linear thermal expansion
	10.90628	average	period	13	10^{-6}
	350.0637	average	T		K
	-32.25689	average	P		bar
	20.30939	average	V		$Å^3$
	-4.580097	average	potential		ev/atom
	10.91337	average	period		Å
β-tin	-4.316107485	potential	energy	0.31	Energy relative to DC
	9.999298406	x	period	2.588	NN distance (Å)
				2.500	a (Å)
	10.84128723	z	period	1.084	c/a
bcc	-4.246460391	potential	energy	0.38	Energy relative to DC
	15.95199483	x	period	2.763	NN distance (Å)
				3.190	a (Å)
Simple cubic	-4.213845041	potential	energy	0.42	Energy relative to DC
	10.61223773	x	period	2.653	NN distance (Å)
				2.653	a (Å)
dimer	-2.473092215	potential	energy	2.16	Energy relative to DC
				2.448	NN distance (Å)
fcc	-4.130246995	potential	energy	0.50	Energy relative to DC
	16.59847758	x	period	2.934	NN distance (Å)
				4.150	a (Å)
hcp	-4.136108481	potential	energy	0.49	
	11.75578552	x	period	2.939	NN distance (Å)
				2.939	a (Å)
	14.30825008	z	period	1.623	c/a