

# Stopping for Ion : **He** , Target = **C**

Pub. Year	Authors, Title, Journal Citation and Comments	Citation Numb
<b>1961</b>	Porat, D. I. Ramavataram, K. 'Differential Energy Loss and Ranges of Ne, N, and He Ions' <i>Proc. Phys. Soc.</i> , 78, 1135-43 (1961) <i>Comment</i> : S. (0.4 - 6.2 MeV) D, He, Ne, N -> C, Al, Ni, Ag, Au	1961-Pora2 0250
<b>1962</b>	VanWijngaarden, A. Duckworth, H. E. 'Energy Loss in Condensed Matter of 1H, and 4He in the Energy Range 4 < E < 30 keV' <i>Can. J. Phys.</i> , 40, 1749-64 (1962) <i>Comment</i> : S. 4-30 keV H, He -> C, Al2O3	1962-VanW 0356
<b>1963</b>	Ormrod, J. H. Duckworth, H. E. 'Stopping Cross Sections in Carbon for Low-Energy Atoms with Z < 12' <i>Can. J. Phys.</i> , 41, 1424-42 (1963) <i>Comment</i> : S. (10-130 keV) H, He, Li, Be, B, C, N, O, F, Ne, Na, Mg -> C	1963-Ormr 0166
<b>1965</b>	Moorhead, R. D. 'Stopping Cross Sections of Low Atomic Number Materials for He+ 65-180 keV' <i>J. Appl. Phys.</i> , 36, 391-96 (1965) <i>Comment</i> : S. 65 - 180 keV H, He -> C, He -> Al, Cr	1965-Moor 0217
<b>1965</b>	Pivovar, L. I. Nikolaichuk, L. I. Rashkovan, V. M. 'Passage of Lithium Ions through Condensed Targets' <i>Zh. Eksp. Teor. Fiz.</i> , 47, 1221-27 (1964) [Engl. Trans. Sov. Phys. JETP, 20, 225-29 (1965)] <i>Comment</i> : S. 20-145 keV Li -> C	1965-Pivo 0194
<b>1965</b>	Sautter, C. A. Zimmermann, E. J. 'Stopping Cross Sections of Carbon and Hydrocarbon Solids for Low-Energy Protons and Helium Ions' <i>Phys. Rev. A</i> , 140, 490-98 (1965). <i>Comment</i> : S. 30-350 keV H, He -> C, Plastics	1965-Saut 0232
<b>1967</b>	Vasilievsky, I. M. Prokoshkin, Yu. D. 'Ionization Energy Loss of Protons, Deuterons and Alpha-Particles' <i>Yaderna Fiz. (Russia)</i> , 4, 549-55 (1966)[Engl. Trans. Sov. Phys. Nucl. Phys., 4, 390-94 (1967)] <i>Comment</i> : S. (267-650 MeV) H, D, He -> Cu, H, C, Al, Sn, Pb	1967-Vasi 0313
<b>1969</b>	Chu, W. K. Powers, D. 'Alpha-Particle Stopping Cross Sections in Solids from 400 keV to 2 MeV' <i>Phys. Rev.</i> , 187, 478-90 (1969) <i>Comment</i> : S. 0.4-2.0 MeV He -> Be, C, Mg, Al, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Ge, Pd, Ag, In, Sn	1969-Chu 0382
<b>1970</b>	Bernstein, W. Cole, A. J. Wax, R. L. 'Penetration of 1-20 keV Ions through Thin Carbon Foils' <i>Nucl. Inst. Methods</i> , 90, 325-28 (1970) <i>Comment</i> : S. 1-20 keV H, O, He, Li, N, Ne, K -> C	1970-Bern 0658

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<b>1970</b>	Hogberg, G. Norden, H. Berry, H. G. 'Angular Distributions of ions Scattered in Thin Carbon Foils' <i>Nucl. Inst. Methods, 90, 283-288 (1970)</i> <i>Comment : S. H, D, He, Li, N, Ne, Ar (3-45 keV) -&gt; C Energy loss vs. Angular Effects.</i>	<b>1970-Hogb2</b> 1668
<b>1972</b>	Williamson, J. Watt, D. E. 'The Influence of Molecular Binding on the Stopping Power of Alpha Particles in Hydrocarbons' <i>Phys. Med. Biol., 17, 486-92 (1972)</i> <i>Comment : S. 1.5 MeV He -&gt; C, H, Many Hydrocarbons</i>	<b>1972-Will</b> 0233
<b>1973</b>	Samuel, B. Matthias, D. Ann, T. 'Radiation Damage to Carbonaceous Deposits from Alpha Particles' <i>Biol. Res. Methods, A00, 26-34 (1973)</i> <i>Comment : S. R. He (1-8 MeV) -&gt; Biol. Samples and Hydrocarbons</i>	<b>1973-Samu</b> 2412
<b>1974</b>	Baglin, J. E. E. Ziegler, J. F. 'Tests of Bragg's Rule for Energy Loss of 4He Ions in Solid Compounds' <i>J. Appl. Phys., 45, 1413-1415 (1974)</i> <i>Comment : S. He (2 MeV) -&gt; Si, Rh, Hf, Al, W, C, and many compounds</i>	<b>1974-Bagl</b> 1583
<b>1976</b>	Matteson, S. Chau, E. K. L. Powers, D. 'Stopping Cross Section of Bulk Graphite for Alpha Particles' <i>Phys. Rev. A, 14, 169-75 (1976)</i> <i>Comment : S. 0.3-2.0 MeV He -&gt; C</i>	<b>1976-Matt</b> 0879
<b>1977</b>	Mertens, P. 'Energy Loss of Light 100 - 300 keV Ions in Thin Metal Foils' <i>Nucl. Inst. Methods, 149, 149-153 (1978)</i> <i>Comment : S, dS.H, He, Li, Be, B, C, N, O, F, Ne (300 keV) -&gt; C, Ni, Co, Nb. 300 keV He, Ne, F, O, N -&gt; C, Al, Ti, Mn, Fe, Co, Ni, Cu, Nb, Ag, Au</i>	<b>1977-Mert</b> 0928
<b>1978</b>	Oetzmann, H. Kalbitzer, S. '4He Stopping Power Measurements by using Ion Implantation and Backscattering Techniques' <i>Intl. Conf. Ion Beam Modification of Materials, Budapest -d (1978)</i> <i>Comment : S. 0.15-1 MeV He -&gt; C, Ge, Si</i>	<b>1978-Oetz</b> 1134
<b>1979</b>	Gloeckler, G. Hsieh, K. C. 'Time-of-Flight Technique for Particle Identification at Energies 2-400 keV/amu' <i>Nucl. Inst. Methods, 165, 537-544 (1979)</i> <i>Comment : S. H, He, C, N, Ne, Ar (3-100 keV/amu) -&gt; C</i>	<b>1979-Gloe</b> 1653
<b>1979</b>	Mertens, P. 'Electronic Stopping Cross Sections of 50-300 keV He and Li Ions' <i>Phys. Rev. A, 19, 1442-1447 (1979)</i> <i>Comment : S. 50-300 keV He, Li -&gt; C, Al, Cu, Ag, Au</i>	<b>1979-Mert</b> 1130

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<b>1979</b>	Sander, U. Bukow, H. H. Buttlar, H. 'Correlation of Energy Loss and Crystallographic Transformation in Ion Irradiated Carbon Foils' <i>Nucl. Inst. Methods, 167, 35-39 (1979)</i> <i>Comment : S. He (200-355 keV) -&gt; C. Effects of target crystallization on stopping powers.</i>	1979-Sand 1755
<b>1979</b>	Santry, D. C. Werner, R. D. 'Stopping Powers for Heavy Ions in Carbon over the Energy Region 200 to 2000 keV' <i>IEEE Trans. Nucl. Sci., NS-26, 1335-1337 (1979)</i> <i>Comment : S. 200-2000 keV He, Li, C, N, O -&gt; C</i>	1979-Sant2 1198
<b>1979</b>	Santry, D. C. Werner, R. D. 'Thickness Measurements of Thin Foils using Alpha Particles from <sup>148</sup> Gd and <sup>241</sup> Am' <i>Nucl. Inst. Methods, 159, 523-527 (1979)</i> <i>Comment : S, dS. 3.138 MeV - 5.486 MeV He -&gt; Be, C, Al, Si, Ni, Ag, Au</i>	1979-Sant3 1350
<b>1979</b>	Varelas, C. 'Stopping Powers of Helium and Deuterium in Gold and Carbon' <i>Preprint (1979) 13</i> <i>Comment : S. 30-220 keV 2H, He -&gt; Au, C</i>	1979-Vare 1256
<b>1980</b>	Fearick, R. W. Sellschop, J. P. F. 'Energy Loss of Light Ions in Diamonds' <i>Nucl. Inst. Methods, 168, 51-55 (1980)</i> <i>Comment : S, dS. 2-24 MeV H, He, Li -&gt; C</i>	1980-Fear 1311
<b>1980</b>	Mertens, P. Krist, Th. 'Stopping Ratios of 50-300 keV Light Ions in Metals' <i>Nucl. Inst. Methods, 168, 33-39 (1980)</i> <i>Comment : S, dS. 30-300 keV H, He, Li, Be -&gt; C, Al, Cu, Ag, Au</i>	1980-Mert 1313
<b>1980</b>	Oetzmann, H. Kalbitzer, S. 'He4-Stopping Power Measurements by using Ion Implantation and Backscattering Techniques' <i>Rad. Effects, 47, 73-80 (1980)</i> <i>Comment : S, dS. 0-1E5 keV He -&gt; C, Si, Ge</i>	1980-Oetz 1324
<b>1980</b>	Santry, D. C. Werner, R. D. 'Stopping Power Values of Be, C, Al and Si for 4He Ions' <i>Nucl. Inst. Methods, 178, 523-530 (1980)</i> <i>Comment : S. He (0.2-2.0 MeV) -&gt; Be, C, Al, Si</i>	1980-Sant2 1407
<b>1981</b>	Bednyakov, A. A. Bulgakov, Y. V. Nikolaev, V. S. Chernov, V. L. 'Energy Straggling of Hydrogen and Helium Ions in Al, C, and Polystyrene at Energies of Tens and Hundreds keV/amu' <i>Phys. Stat. Sol. A, 68, 187 (1981)</i> <i>Comment : S, dS. H, He (70-1200 keV) -&gt; Al, C, Polystyrene</i>	1981-Bedn 1958

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<b>Pub. Year</b>	<b>Authors, Title, Journal Citation and Comments</b>	<b>Citation Numb</b>
<b>1981</b>	Pearce, J. D. Hart, R. R. 'Stopping Power Measurements in the 20-150 keV Region using Thick Target Backscattering: H and He on C, Si and Au' <i>J. Appl. Phys.</i> , 52, 5056 (1981) <i>Comment</i> : S. H, He (20-150 keV) -> C, Si, Au	<b>1981-Pear</b> 1736
<b>1981</b>	Santry, D. C. Werner, R. D. 'Stopping Power Values of C, Al, Si, Ni, Ag and Au for 3He Ions' <i>Nucl. Inst. Methods</i> , 185, 517-521 (1981) <i>Comment</i> : S. He3 (200-2000 keV) -> C, Al, Si, Ni, Ag, Au	<b>1981-Sant2</b> 1449
<b>1982</b>	Kreussler, S. Varelas, C. Sizmann, R. 'Electronic Stopping Power and Effective Charge of 50- to 230 keV D and He in C, Al, Au and Cs' <i>Phys. Rev. B</i> , 26 (11), 6099-6103 (1982) <i>Comment</i> : S. D, He (50-230 keV) -> C, Al, Cs, Au	<b>1982-Kreu</b> 1416
<b>1982</b>	Lennard, W. N. Andrews, H. R. Freeman, M. Ward, D. 'Time of Flight System for Slow Heavy Ions' <i>Nucl. Inst. Methods</i> , 203, 565 (1982) <i>Comment</i> : S. He (650 keV) -> C, Au	<b>1982-Lenn</b> 1701
<b>1982</b>	Mertens, P. Krist, Th. 'Stopping Ratios of 50 - 300 keV Light Ions in Metals' <i>Nucl. Inst. Methods</i> , 194, 57 (1982) <i>Comment</i> : S. 50-300 keV H, He, Li, Be -> C, Al, Cu, Ag, Au	<b>1982-Mert</b> 1133
<b>1982</b>	Mertens, P. Krist, Th. 'Stopping Ratios for 30 - 300 keV Ions with $1 \leq Z \leq 5$ ' <i>J. Appl. Phys.</i> , 53 (11), 7343 - 7349 (1982) <i>Comment</i> : S. H, He, Li, Be, B (30-330 keV) -> C, V, Cr, Fe, Ni, Zn	<b>1982-Mert3</b> 1394
<b>1982</b>	Mertens, P. Krist, Th. 'Energy Loss of 300 keV He and N in 150 to 800 Angstrom Carbon Foils' <i>Phys. Rev. B</i> , 25, 9, 5591-5597 (1982) <i>Comment</i> : S. He, N (300 keV) -> C	<b>1982-Mert4</b> 1459
<b>1982</b>	Schultz, F. Brandt, W. 'Effective Charge of Low Velocity Ions in Matter: A Comparison of Theoretical Predictions with Data Derived from Energy Loss Measurements' <i>Phys. Rev. B</i> , 26, 4864 (1982) <i>Comment</i> : S. He, N, Ne, Ar (0.5-1.3 Vo) -> C, Al, Au	<b>1982-Schu</b> 1959
<b>1983</b>	Krist, Th. Mertens, P. 'Stopping Ratios for 30-330 keV Light Ions in Materials with $57 \leq Z \leq 83$ ' <i>Nucl. Inst. Methods</i> , 218, 821-826 (1982) <i>Comment</i> : S. H, He, Li (50-300 keV) -> C, Al, Cu, Ag, Au	<b>1983-Kris</b> 1312

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<b>1983</b>	Steuer, M. F. Gemmell, D. S. Kanter, E. P. Johnson, E. A. Zabransky, B. J. 'Stopping Power for Fast Nitrogen and Oxygen Diclusters in Carbon' <i>IEEE Trans. Nucl. Sci, NS-30, 1069-1073 (1983)</i> <i>Comment : S. H, He, N, O (1-3.6 MeV) -&gt; C. Molecular energy loss differences.</i>	<b>1983-Steu</b> 1774
<b>1984</b>	Cowern, N. E. B. Read, P. M. Sofield, C. J. Bridwell, L. B. Lucas, M. W. 'Charge Changing Energy Loss, Higher Order Z1 Dependence, and Pre-Equilibrium Behaviour in the Stopping Power for Energetic Ions in Solids' <i>Phys. Rev. A, 30, 4, 1682-1691 (1984)</i> <i>Comment : S. He, Li, C (3 MeV/amu) -&gt; C (charge state analysis)</i>	<b>1984-Cowe</b> 1469
<b>1984</b>	Cowern, N. E. B. Read, P. M. Sofield, C. J. Bridwell, L. B. Hustable, G. 'Charge State Dependence of dE/dx for Ions in Very Thin Targets' <i>Nucl. Inst. Methods, B2, 112 (1984)</i> <i>Comment : S. He, Li, C (3 MeV/amu) -&gt; C (target thickness effects)</i>	<b>1984-Cowe2</b> 1637
<b>1984</b>	Eckardt, J. C. Lantschner, G. H. Jakas, M. M. Ponce, V. H. 'The Correlation Between Inelastic Energy Loss and Scattering angle in Transmission Experiments' <i>Nucl. Inst. Methods, B2, 168-172 (1984)</i> <i>Comment : S. H, He (50-200 keV) -&gt; C, Al (S vs. transmission angle)</i>	<b>1984-Ecka</b> 1438
<b>1984</b>	Krist, Th. Mertens, P. 'Application of Brandt's Effective Charge Theory to Measurements for 50-350 keV Ions with $1 \leq Z1 \leq 5$ ' <i>Nucl. Inst. Methods, B2, 119-122 (1984)</i> <i>Comment : S. H, He, Li, Be, B (50-350 keV) -&gt; C, Al, V, Cr, Fe, Ni, Cu, Zn, Ag, Pt, Au, Bi</i>	<b>1984-Kris</b> 1467
<b>1984</b>	Lennard, W. N. Phillips, D. Mitchell, I. V. Andrews, H. R. Ward, D. 'Search for Pre-Equilibrium Stopping for He Ions in Thin Carbon Foils' <i>Nucl. Inst. Methods, B2, 116 (1984)</i> <i>Comment : S. H, He (270-620 keV) -&gt; C (thickness effects)</i>	<b>1984-Lenn</b> 1703
<b>1984</b>	Santry, D. C. Werner, R. D. 'Stopping Powers of C, Al, Si, Ti, Ni, Ag, Au and Mylar using Radioactive Alpha Sources' <i>Nucl. Inst. Methods, B1, 13 (1984)</i> <i>Comment : S. He (2-7 MeV) -&gt; &gt; C, Al, Si, Ti, Ni, Ag, Au, Mylar</i>	<b>1984-Sant</b> 1757
<b>1986</b>	Krist, Th. Scanlon, P. J. Mertens, P. Barfoot, K. M. Reid, I. 'Precision Measurements of Energy Losses of HE-Ions in Thin Carbon Foils' <i>Nucl. Inst. Methods, B14, 179 (1986)</i> <i>Comment : S. He (300-620 keV) -&gt; c (thickness effects)</i>	<b>1986-Kris</b> 1693

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<b>1986</b>	Mertens, P. Krist, Th. 'The Influence of Foil Inhomogeneities on the Angular Dependence of Experimental Stopping Cross Sections' <i>Nucl. Inst. Methods, B13, 95 (1986)</i>	<b>1986-Mert3</b> 1721
	<i>Comment : S. He, He, N (300 keV) -&gt; C (thickness effects)</i>	
<b>1987</b>	Geissel, H. Winterbon, K. B. Lennard, W. N. 'Small Angle Energy Loss Measurements for H and He Ions in Carbon' <i>Nucl. Inst. Methods, B27, 333 (1987)</i>	<b>1987-Geis</b> 1652
	<i>Comment : S. H, He (0.5-7.0 MeV) -&gt; C (angular effects)</i>	
<b>1987</b>	Read, P. M. Sofield, C. J. Cowern, N. E. B. Bridwell, L. B. 'Stopping Powers for Energetic Ions in Carbon Targets' <i>Nucl. Inst. Methods, B29, 583-586 (1987)</i>	<b>1987-Read</b> 1401
	<i>Comment : S. He, Li, C, O (3-7 MeV/amu) -&gt; C</i>	
<b>1991</b>	Ogawa, H. Katayama, I. Ikegami, J. Haruyama, Y. Aoki, A. 'Charge Changing Contributions to Energy Loss of 32 MeV He-3+ in the Charge State Non-Equilibrium Region' <i>Phys. Letters A, 160, 77-80 (1991)</i>	<b>1991-Ogaw</b> 1905
	<i>Comment : S. He-3 (32 MeV) -&gt; C</i>	
<b>1991</b>	Ogawa, H. Katayama, I. Ikegami, H. Haruyama, Y. Aiki, A. 'Direct Measurement of Stopping Powers for 32 MeV He-3 in a Charge State Non-Equilibrium Region' <i>Phys. Rev. B, 43, 11370-11373 (1991)</i>	<b>1991-Ogaw2</b> 1912
	<i>Comment : S. He-3 (32 MeV) -&gt; C (Thin foils)</i>	
<b>1993</b>	Mikheev, S. Ryzhov, Y. Shkarban, I. Yurasova, V. 'Inelastic Losses of Low Energy Ions Transmitted through Thin Films' <i>Nucl. Inst. Methods, B78, 86-90 (1993)</i>	<b>1993-Mikh</b> 1870
	<i>Comment : S. He, Ne, Ar (1-10 keV) -&gt; C, Ca, Ag and Ni</i>	
<b>1995</b>	Shao, Q. Huo, Y. Pan, Z. Wang, N. 'Influence of the Electronic Stopping Cross Section on Calculated Results of the Mean Projected Ranges' <i>Nucl. Tech., 18, 711-716 (1995)</i>	<b>1995-Shao</b> 1830
	<i>Comment : S. He (.2-2 MeV) -&gt; C, Ni</i>	
<b>1997</b>	Ogawa, H. Sakamoto, N. Katayama, I. Haruyama, Y. Saito, M. 'Energy Loss of 10 MeV/u Atomic Helium in Carbon' <i>Nucl. Inst. Methods, B 132, 36-40 (1997)</i>	<b>1997-Ogawa</b> 2362
	<i>Comment : S. He (10 MeV/u) -&gt; C</i>	
<b>2002</b>	Geissel, H. Weick, H. Scheidenberger, C. Bimbot, R. Gardes, D. 'Experimental Studies of Heavy-Ion Slowing Down in Matter' <i>Nucl. Inst. Methods, B195, 3-54 (2002)</i>	<b>2002-Geis</b> 3141
	<i>Comment : S. Summary of 18 Heavy Ion Stopping in 26 Targets</i>	

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<b>2002</b>	Trzaska, W. H. Lyapin, V. Alanko, T. Mutterer, M. Raisanen, J. 'New Approach to Energy Loss Measurements' <i>Nucl. Inst. Methods, B195, 147-165 (2002)</i> <i>Comment : S. Ar, Si, O, He, H -&gt; Au, Ni, C, Havar</i>	<b>2002-Trza</b> 3140
<b>2002</b>	Zhang, Y. Possnert, G. 'Electronic Stopping Power of Swift Heavy Ions in Carbon' <i>Nucl. Inst. Methods, B190, 69-73(2002)</i> <i>Comment : S. He, Be, C and Al -&gt; C</i>	<b>2002-Zhan2</b> 3137