

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

Pub. Year	Authors, Title, Journal Citation and Comments	Citation Numb
<b>1909</b>	Taylor, T. S. 'On the Retardation of Alpha Rays by Metals and Gases' <i>Phil. Mag., 18, 604-619 (1909)</i> <i>Comment : S. 7.7 MeV He -&gt; Au, Sn, Pb, Al, H2, Paper, Collodium, Rel. To Air</i>	1909-Tayl 0117
<b>1924</b>	Rutherford, E. 'The Capture and Loss of Electrons by Alpha Particles' <i>Phil. Mag., 47, 277 (1924)</i> <i>Comment : S. He (5-7 MeV) -&gt; Air, H, He, Mica</i>	1924-Ruth 1994
<b>1925</b>	Gurney, R. W. 'The Stopping-Power of Gases for Alpha-Particles of Different Velocities' <i>Proc. Roy. Soc., A107, 340-349 (1925)</i> <i>Comment : S. 5.3, 6.1 MeV He -&gt; H2, He, O2, Ne, Ar, Kr, Xe Rel. To Air</i>	1925-Gurn 0061
<b>1927</b>	Gibson, G. E. Eyring, H. 'The Ionization and Stopping Power of Various Gases for Alpha Particles from Polonium' <i>Phys. Rev., 30, 553-561 (1927)</i> <i>Comment : S. He (2-7 MeV) -&gt; H, He, N, O, Ne, Ar, CH2. Early stopping paper- values based on differential of range/ionization measurements.</i>	1927-Gibs 1577
<b>1934</b>	Mano, G. 'Recherches Sur L'Absorption Des Rayons Alpha' <i>Ann. de Physique, 1, 408-531 (1934)</i> <i>Comment : S. 4.2-7.7 MeV He -&gt; H2, He, Ne, Ar, Air</i>	1934-Mano 0085
<b>1949</b>	Hatfield, T. N. Lockenwitz, A. E. Colby, M. Y. 'The Relative Stopping Power of Gases for Alpha Particles from Polonium' <i>J. Franklin Inst., 247, 133-36 (1949)</i> <i>Comment : S. 5.3 MeV He -&gt; H2, N2, O2, N2O, CO2, H2S, Hydrocarbons</i>	1949-Hatf 0065
<b>1953</b>	Weyl, P. K. 'The Energy Loss of Hydrogen, Helium, Nitrogen and Neon Ions in Gases' <i>Phys. Rev., 91, 289-96 (1953)</i> <i>Comment : S. 150-450 keV H, D, He, N, Ne -&gt; H2, He, Air, Ar</i>	1953-Weyl 0131
<b>1962</b>	Martin, F. W. Northcliffe, L. C. 'Energy Loss and Effective Charge of He, C, and Ar Ions' <i>Phys. Rev., 128, 1166-1174 (1962)</i> <i>Comment : S. He, C, Ar (4-400 MeV) -&gt; H, He, N, Ar</i>	1962-Mart 0148
<b>1964</b>	Cuevas, J. Garcia-Munoz, M. Torres, P. Allison, S. K. 'Partial Atomic and Ionic Stopping Powers of Gaseous Hydrogen for Helium and Hydrogen Beams' <i>Phys. Rev. A, 135, 335-45 (1964)</i> <i>Comment : S. 40-460 keV He -&gt; H2</i>	1964-Cuev 0177

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1967	Vasilievsky, I. M. Prokoshkin, Yu. D. 'Ionization Energy Loss of Protons, Deuterons and Alpha-Particles' <i>Yaderna Fiz. (Russia), 4, 549-55 (1966)[Engl. Trans. Sov. Phys. Nucl. Phys., 4, 390-94 (1967)]</i>	1967-Vasi 0313
	<i>Comment : S. (267-650 MeV) H, D, He -&gt; Cu, H, C, Al, Sn, Pb</i>	
1968	Hvelplund, P. 'Prisopgave' <i>Aarhus University P. 1-105 (In Danish) (1968)</i>	1968-Hvel 0406
	<i>Comment : S, dS. Many Ions (H-Hg) at 50-500 keV -&gt; H, He, Ne, Ar, Kr, Xe, Air</i>	
1971	Bourland, P. D. Chu, W. K. Powers, D. 'Stopping Cross Section of Gases for Alpha Particles from 0.3 - 2.0 MeV' <i>Phys. Rev. B, 3, 3625-35 (1971)</i>	1971-Bour 0439
	<i>Comment : S. 0.3-2.0 MeV He -&gt; H2, O2, N2, NH3, N2O, CO, CO2, Hydrocarbons</i>	
1971	Bourland, P. D. Powers, D. 'Bragg-Rule Applicability to Stopping Cross Sections of Gases for Alpha Particles of Energy 0.3 - 2.0 MeV' <i>Phys. Rev. B, 3, 3635-41 (1971)</i>	1971-Bour2 0440
	<i>Comment : S. 0.3-2.0 MeV He -&gt; H2, O2, N2, NH3, N2O, CO, CO2, Hydrocarbons</i>	
1971	Hoyer, U. Waffler, H. 'Der Atomare Bremsquerschnitt von H2, D2, He, N2 und a Fur Alpha-Teilchen in Umladungsgebiet (0.5 < E < 2 MeV).' <i>Z. Naturforschg. 26A, 592-95 (1971)</i>	1971-Hoye 0431
	<i>Comment : S. 0.5-2.0 MeV He -&gt; H2, D2, N2, Ar</i>	
1971	Hvelplund, P. 'Energy Loss and Stragglng of 100-500 keV Atoms with 2 ó Z1 ó 12 in Various Gases' <i>Kgl. Danske Videnskab. Selskab Mat. Fys. Medd., 38, No. 4, P. 1-25 (1971)</i>	1971-Hvel 0421
	<i>Comment : S,dS. (100-500 keV) He, Li, Be, B, C, N, O, F, Ne, Na, Mg -&gt; Air, He, Ne, H2, O2</i>	
1972	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>	1972-Will 0233
	<i>Comment : S. 1.5 MeV He -&gt; C, H, Many Hydrocarbons</i>	
1973	Wenger, E. Gardner, R. P. Verghese, K. 'Molecular Stopping Cross Sections of Alpha Particles in Butane, Propane, Ethane, Neon, Helium, and Hydrogen' <i>Health Phys., 25, 67-71 (1973)</i>	1973-Weng 0828
	<i>Comment : S. (2.5-6 MeV) He -&gt; H2, Ne, He, C2H6, C3H8, C4H10</i>	

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<b>1975</b>	Langley, R. A. 'Stopping Cross Sections for Helium and Hydrogen in H <sub>2</sub> , N <sub>2</sub> , O <sub>2</sub> and H <sub>2</sub> S (0.3 - 2.5 MeV)' <i>Phys. Rev. B, 12, 3575-83 (1975)</i> <i>Comment : S. 0.3-2.5 MeV H, He -&gt; H<sub>2</sub>, N<sub>2</sub>, O<sub>2</sub>, H<sub>2</sub>S</i>	<b>1975-Lang</b> 0785
<b>1977</b>	Besenbacher, F. 'Stopping Power and Stragglings for H and He Ions in Gas Targets' <i>Specialeopgave. Aarhus University (1977)</i> <i>Comment : S. dS. 20-500 keV H, He -&gt; H, He N, O, Ne, Ar, Kr, Xe, CO<sub>2</sub></i>	<b>1977-Bese</b> 0954
<b>1977</b>	DelBianco, W. Richer, J. 'Stopping Power of Alpha Particles in Deuterium Gas' <i>Nucl. Inst. Methods, 140, 215 (1977)</i> <i>Comment : S. 5.5 MeV He -&gt; D</i>	<b>1977-DelB</b> 1045
<b>1978</b>	Hanke, C. C. Laursen, J. 'Stopping Cross Sections for Alpha Particles from 1.0 to 8.5 MeV in H <sub>2</sub> , He, N <sub>2</sub> , O <sub>2</sub> , Ne, Kr, and Xe.' <i>Nucl. Inst. Methods, 151, 253-260 (1978)</i> <i>Comment : S. 1.0 - 8.5 MeV He -&gt; H, He, N, O, Ne, Kr, Xe.</i>	<b>1978-Hank</b> 1082
<b>1979</b>	Besenbacher, F. Andersen, H. H. Hvelplund, P. Knudsen, H. 'Stopping Power of Swift Hydrogen and Helium Ions in Gases' <i>Kgl. Danske Videnskab. Selskab Mat. Fys. Medd. 40, 1-39 (1979)</i> <i>Comment : S. 40 keV-1 MeV H And 100 keV-2.4 MeV He -&gt; H<sub>2</sub>, He, N<sub>2</sub>, O<sub>2</sub>, CO<sub>2</sub>, Ne, Ar, Kr, Xe</i>	<b>1979-Bese</b> 1160
<b>1979</b>	Dennis, J. A. Powers, D. 'The Dependence of Stopping Power on Physical and Chemical States' <i>Preprint (1979) 8</i> <i>Comment : S. H, He -&gt; Gases (Review Of Current Data)</i>	<b>1979-Denn</b> 1193
<b>1979</b>	Whillock, M. J. Edwards, A. A. 'Determination of the Stopping Cross Sections of N, H, CH <sub>4</sub> , C <sub>4</sub> H <sub>10</sub> and C <sub>3</sub> H <sub>6</sub> using Alpha Particles in the Range 1.3-4.2 MeV' <i>Phys. Med. Biol., 24, 518-524 (1979)</i> <i>Comment : S. He (1.3-4.2 MeV) -&gt; N, H, CH<sub>4</sub>, C<sub>4</sub>H<sub>10</sub>, C<sub>3</sub>H<sub>6</sub></i>	<b>1979-Whil</b> 1540
<b>1982</b>	Fukuda, A. 'Stopping Powers of H <sub>2</sub> , O <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> for 40-200 keV He and N Ions' <i>Phys. Med. Biol., 27 (1), 73-39 (1982)</i> <i>Comment : S. He, N (40-200 keV) -&gt; H, O, C<sub>2</sub>H<sub>4</sub> (gases)</i>	<b>1982-Fuku</b> 1557
<b>1983</b>	Baumgart, H. Berg, H. Huttel, E. Pfaff, E. Reiter, G. 'He <sup>4</sup> Stopping Cross Sections in H <sub>2</sub> , He, N <sub>2</sub> , O <sub>2</sub> , Ne, Ar, Kr, Xe, CH <sub>4</sub> and CO <sub>2</sub> ' <i>Nucl. Inst. Methods, 215, 319-328 (1983)</i> <i>Comment : S. He (0.1-1.2 MeV) -&gt; H<sub>2</sub>, He, N<sub>2</sub>, O<sub>2</sub>, Ne, Ar, Kr, Xe, CH<sub>4</sub> and CO<sub>2</sub></i>	<b>1983-Baum3</b> 1450

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<b>1990</b>	Reiter, G. Kniest, N. Pfaff, E. Clausnitzer, G. 'Proton and Helium Stopping Cross Sections in H, He, N, O, Ne, Ar, Kr, Xe, CH4' <i>Nucl. Inst. Methods, B44, 399-411 (1990)</i> <i>Comment : S. H, He (0.7-3.0 MeV) -&gt; H, He, N, O, Ne, Ar, Kr, Xe, CH4</i>	<b>1990-Reit</b> 1933
<b>1992</b>	Golser, R. Semrad, D. 'Energy Loss of Hydrogen and Helium Ions in Hydrogen and Helium Gas: Looking for Exceptions from Velocity Proportionality' <i>Nucl. Inst. Methods, B69, 18-21 (1992)</i> <i>Comment : S. H, D, He (2-20 keV/amu) -&gt; H, He</i>	<b>1992-Gols3</b> 1893