

REFERENCES

- [1] Ibrahim, A.N. *et al.* (1999). *Industrial Radiography*. Kajang: Institut Penyelidikan Teknologi Nuklear
- [2] Speller, R.D. and Horrocks, J.A. (1991). Photon scattering – a ‘new’ source of information in medicine and biology?. *Phys. Med. Biol.* **36**, 1
- [3] Hubbell, J.H. (2000). X-ray cross-sections and crossroads (The International Radiation Physics Society) – Richard Pratt’s contributions to both. *Radiation Physics and Chemistry* **59**, 113
- [4] Roy, S. *et al.* (2003). Radiotherapy of cancer patients and related measurements. *Journal of Bangladesh Academy of Sciences* **27**, 65
- [5] Anjos, M.J., Lopes, R.T. and Borges, J.C. (1989). Compton scattering of gamma-rays as a surface inspection technique. *Nuclear Instruments and Methods in Physics Research A* **280**, 535
- [6] Verma, S.L., Allawadhi, K.L. and Sood, B.S. (1980). Determination of integral Compton-scattering cross sections at 279-keV gamma rays from K-shell electrons in Fe, Ni, Cu, Zn, As, Se, and Br. *Physical Review A* **22**, 1753
- [7] Medhat, M.E. (2009). Gamma-ray attenuation coefficients of some building materials available in Egypt. *Annals of Nuclear Energy* **36**, 849
- [8] Akkurt, I. *et al.* (2010). Photon attenuation coefficients of concrete includes barite in different rate. *Annals of Nuclear Energy* **37**, 910

- [9] Singh, K. et al. (2002). Gamma-ray attenuation coefficients in bismuth borate glasses. *Nuclear Instruments and Methods in Physics Research B* **194**, 1
- [10] Singh, K. et al. (1996). Study of effective atomic numbers and mass attenuation coefficients in some compounds. *Radiat. Phys. Chem.* **47**, 535
- [11] Cember, H. (1980). *Introduction to Health Physics*. United States of America:Pergamon Press
- [12] Halmsaw, R. (1982). *Industrial Radiology Theory and Practise*. Great Britain:Applied Science Publishers
- [13] Rockley, J.C. (1964). *An Introduction to Industrial Radiology*. Great Britain:Butterworths & Co. (Publishers) Limited
- [14] <http://physics.nist.gov>
- [15] Lawrence Berkeley National Laboratory, <http://ie.lbl.gov/education/isotopes.html>
- [16] Shull, P.J. (2002). *Nondestructive Evaluation Theory, Techniques, and Applications*. United States of America:Marcel Dekker,Inc
- [17] Johns, H.E. and Cunningham, J.R. (1978). *The Physics of Radiology*. United States of America:Charles C Thomas
- [18] Rundquist, D.E. (1980). *Research Techniques in Non Destructive Testing – Volume IV*. United States of America:Academic Press
- [19] Halmsaw, R. (1991). *Non-Destructive Testing*, Great Britain:Edward Arnold

- [20] Compton, A.H. (1923). A quantum theory of the scattering of x-rays by light elements. *Phys. Rev.* **21**, 483
- [21] Jauncey, G.E.M. (1923). A corpuscular quantum theory of the scattering of x-rays by light elements. *Phys. Rev.* **22**, 233
- [22] Dorobantu, V. (2005). Double wall technique pipelines' inspection using gamma rays. *NDT.net* **10**
- [23] Hubbell, J.H. et al. (1975). Atomic form factors, incoherent scattering functions, and photon scattering cross section. *J. Phys. Chem. Ref. Data* **4**, 471
- [24] Dorobantu, V., X-ray dan gamma ray attenuation coefficients in steel, private communication
- [25] Rokkok, B. et al. (2006). Monte carlo simulation of scattering phenomenon effects on industrial radiography. ECNDT 2006 – Tu.4.3.2
- [26] Hubbell, J.H. and Seltzer, S.M. (1996). Tables of x-ray mass attenuation coefficients and mass energy-absorption coefficients from 1 keV to 20 MeV for elements $Z = 1$ to 92 and additional substances of dosimetric interest. Physics Laboratory Physical Reference Data, <http://physics.nist.gov>
- [27] Murty, D.S.R., Govindareddy, V. and Narasimhacharyulu, E. (1972). Incoherent scattering of 279 keV gamma rays by K-shell electrons. *J. Phys. A: Math., Nucl. Gen.* **6**, 265

- [28] Roy, S.C., Chatterjee, B.K. and Pratt, R.H. (2004). An alternative method to calculate inelastic scattering cross sections of photons. *Radiation Physics and Chemistry* **71**, 679
- [29] Bergstrom JR, P.M. and Pratt, R.H. (1997). An overview of the theories used in Compton scattering calculations. *Radiat. Phys. Chem.* **50**, 3
- [30] Kurucu, Y. (2005). Incoherent scattering cross-sections for elements with $23 \leq Z \leq 51$ at 59.5 keV photon energy. *Journal of Electron Spectroscopy and Related Phenomena* **142**, 39
- [31] Erzeneoglu, S.Z., Kurucu, Y. and Sahin, Y. (1998). Incoherent scattering of 59.5 keV gamma rays by Fe, Zn and Nb. *Physica Scripta* **57**, 503
- [32] Simsek, O. et al. (2002). Inelastic scattering of 59.5 keV photons at small momentum transfers by Ti, Fe and Ni elements. *Journal of Quantitative Spectroscopy & Radiative Transfer* **75**, 741
- [33] Umesh, T.K. et al. (1981). Incoherent-scattering cross sections in low- and medium-Z elements derived from the measured total attenuation cross sections in compounds. *Phys. Rev. A* **23**, 2365
- [34] Goncalves, O. et al. (1984). Compton scattering of 662-keV γ rays by various atoms. *Phys. Rev. A* **30**, 1509
- [35] Bauk, S. and Tajuddin, A.A. (2008). Attenuation coefficients of *rhizophora spp.* in the 11.22. to 28.43 keV photon energy range. *Journal of Nuclear and Related Technologies* **5**, 11

- [36] Singh, N. et al. (2006). Gamma-ray attenuation studies of PbO-BaO-B₂O₃ glass system. *Radiation Measurement* **41**, 84
- [37] Sidhu, G.S. et al. (1999). Effect of Collimator Size and Absorber Thickness on Gamma Ray Attenuation Measurements for Bakelite and Perspex. *PRAMANA Journal of Physics* **53**, 851
- [38] Sidhu, G.S. et al. (1999). Effect of Collimator Size and Absorber Thickness on Gamma Ray Attenuation Measurements. *Radiation Physics and Chemistry* **56**, 535
- [39] Dorobantu, V. (2004). X-Ray Linear Attenuation Coefficient in Steel I. Thickness Dependence. *NDT.net* **12**
- [40] Akkurt, I. (2009). Effective Atomic and Electron Numbers of Some Steels at Different Energies. *Annals of Nuclear Energy* **36**, 1702
- [41] Sipaun, S.M. (2004). Determination of Gamma Ray Mass Attenuation Coefficient for Some Industrial Materials. Project report submitted in fulfilment of the requirements for the degree of Master of Science, unpublished
- [42] Radiography Laboratory, NDT Group, Malaysian Nuclear Agency
- [43] Shirakawa, Y. (2000). A build-up treatment for thickness gauging of steel plates based on gamma ray transmission. *Applied Radiation and Isotopes* **53**, 581
- [44] Bochenin, V.I. and Bubnov, V.A. (2000). Feasibility of Experimental X-Ray Sources in Nondestructive Testing. *Russian Journal of Nondestructive Testing* **36**, 450

- [45] Halmshaw, R. (1992). Radiographic Absorption. *The British Journal of Non-Destructive Testing* **34**, 601
- [46] IAEA TecDoc (2008). Development of protocols for corrosion and deposit evaluation in large diameter pipes by radiography. Vienna
- [47] Bergstrom, P.M et al. (1993). Compton scattering of photons from bound electrons: Full relativistic independent-particle-approximation calculations. *Physical Review A* **48**, 1134
- [48] Chatterjee, B.K., LaJohn, L.A. and Roy, S.C. (2006). Investigations on Compton scattering: New directions. *Radiation Physics and Chemistry* **75**, 2165
- [49] Pratt, R.H. (2005). Recent theoretical developments in photon-atom scattering. *Radiation Physics and Chemistry* **74**, 411
- [50] Yalcin, P. et al. (2000). Measurement of the incoherent scattering functions. *Radiation Physics and Chemistry* **58**, 325