Curriculum Vitae

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Research Interests

Spectroscopic investigation of terrestrial and extraterrestrial materials (including minerals, their alteration products, meteorites and alloys). Experimental techniques include Mössbauer spectroscopy, micro Raman spectroscopy and Fourier-transform infrared (FTIR) spectroscopy.

Education

Ph.D., Mineralogy, Uppsala University, Sweden, 2004.
Thesis: Mössbauer spectroscopy of meteoritic and synthetic Fe-Ni alloys
M.Sc., Physics, University of Khartoum, Sudan, 1997.
Thesis: Studies on New Halfa meteorite
B.Sc. (Upper 2nd Class Honours), Physics, University of Khartoum, Sudan, 1992.

Employment

- Associate Professor, Department of Applied Physics and Astronomy, University of Sharjah, United Arab Emirates (2022 - present).
- Assistant Professor, Department of Applied Physics and Astronomy, University of Sharjah, United Arab Emirates (2016 - 2022).
- Visiting Academic, Department of Applied Physics and Astronomy, University of Sharjah, United Arab Emirates (2015 – 2016).
- Research Associate, Department of Geological Sciences, University of Manitoba, Canada (2006 – 2015).
- Postdoctoral research fellow, the Brazilian Centre for Research in Physics, Rio de Janeiro, Brazil (2004 – 2006).
- Ph.D. position (Doktorand), Department of Earth Sciences, Uppsala University, Sweden (2000 – 2004).
- Researcher, Department of Physics and Instrumentation, Sudan Atomic Energy Commission (SAEC), Sudan (1997 – 2000).
- Research Assistant, Department of Physics and Instrumentation, SAEC, Sudan (1993 – 1997).

Awards and Fellowships

- Sharjah Islamic Bank Award for Distinguished Research, 2019.

- National Council for Scientific and Technological Development (CNPq) Postdoctoral Fellowship, Brazil (October 2004–April 2006).
- IAEA fellowship training on Mössbauer Spectroscopy, Department of Earth Sciences, Uppsala University, Sweden (August 1995–May 1996).

Teaching/Mentoring Experience

- Taught the following courses at the University of Sharjah, United Arab Emirates:
    - Introduction to Radiation Physics Dosimetry (1430-442)
    - Physics 3 (1430-211)
    - Physics 1 (1430-115).
    - Physics for Medical Sciences (1430-113).
    - Physics for Health Sciences (1430-107).
    - Remedial Physics (1430-106).

- Taught spectroscopic techniques (Theory and Applications): Mössbauer spectroscopy, FTIR (Fourier Transform Infrared) and Raman spectroscopy as part of the course: Advanced Instrumental Techniques in Geology, Department of Geological Sciences, University of Manitoba, Canada, Fall 2009; Fall 2011. Course taught to senior undergraduates and Graduates.

- Mentored undergraduate and graduate students, Department of Geological Sciences, University of Manitoba, Canada (2007-2014). Helped and guided the students in:
    - Data collection and gaining hands-on experience in spectroscopic techniques.
    - Spectral analysis, presentation of results and technical writing.

- Part-time Teaching Assistant, Department of Physics, Faculty of Science, University of Khartoum, Sudan.
    - Laboratory teaching and demonstration to undergraduate students (1992 – 1995).
    - Conducted weekly Physics tutorials (1990-1991).

Academic/Administrative Committee service

- Member, College of Sciences Strategic Planning and Annual Report Committee, University of Sharjah (2023/2024)
- Chair, Committee for Library, Computing Resources, and Educational Technology Tools, Department of Applied Physics & Astronomy (2022/2023).
- Member, College of Sciences Strategic Planning and Annual Report Committee, University of Sharjah (2022/2023).
- Member, Organizing Committee of the Sharjah International Conference on Physics of Advanced Materials (SICPAM), 25-27 April 2023, University of Sharjah, UAE.
- Member, College of Sciences Student Success and Academic Advising Committee, University of Sharjah (2021/2022).
- Chair, College of Sciences Alumni Committee, University of Sharjah (2020/2021).
- Member, College of Sciences Strategic Plan Committee, University of Sharjah (2016/2017).
- Member, Search Committee for new Faculty positions in the Petroleum Geophysics and Remote Sensing program, Department of Applied Physics and Astronomy, College of Sciences, University of Sharjah.

- Representative of the Department of Applied Physics and Astronomy in the College of Sciences Council (2017/2018).
- Member, Organizing Committee of the 1st Sharjah International Conference on Particle Physics, Astrophysics and Cosmology (FISICPAC), 11-13 Nov. 2018, Sharjah, UAE.
- Vice Chair, Registration subcommittee, Local Organizing Committee, Joint Annual Meeting of the Geological Association of Canada and Mineralogical Association of Canada, Winnipeg, Manitoba, Canada, May 20-24, 2013.

Editorial/Reviewer experience

- Associate Editor-American Mineralogist
- Reviewed papers for the following journals:

  Meteoritics and Planetary Science

  American Mineralogist

  Canadian Mineralogist

  Mineralogical Magazine

  Chemical Geology

Professional Memberships

The Meteoritical Society.

Research Projects

- Investigation of carbon phases in carbonaceous-chondrite inclusions in stony meteorites (80,000 AED-Funded by UOS, 2020-2022), PI.
- Investigation of nanodiamonds in meteorites by Raman and IR spectroscopy (40,000 AED, UOS Seed Project, 2017-2019).
- UAE Meteor Monitoring Network, (1,515,000 AED-Funded by UAE space Agency, 2017-2020), Co-Investigator.

Publications

1. Fernini I., Subhi S., Attaelmanan G., **Abdub Y.A.**, Al-Naimiy H. (2024) Analyzing Meteorites at the Sharjah Academy for Astronomy, Space Sciences, and Technology. In: Ciner, A., et al. Recent Research on Environmental Earth Sciences, Geomorphology, Soil Science and Paleoenvironments. MedGU 2022. Advances in Science, Technology & Innovation, pp. 79–81. Springer, Cham. https://doi.org/10.1007/978-3-031-48754-5_19
2. **Abdu Y.A.**, Gismelseed A.M., Attaelmanan A.G., Shaddad M.H. and Hawthorne F.C. (2023) Thermal and shock history of Almahata Sitta meteorite inferred from structure refinement of pyroxene and Mössbauer spectroscopy of Fe-Ni metal. *Meteoritics and Planetary Science* 58, 737-746. http://dx.doi.org/10.1111/maps.13988
3. Bosi F., Biagioni C., Pezzotta F., Skobgy H., Hålenius U., Cempírek J., Hawthorne F.C., Lussier A.J., **Abdu Y.A.**, Day M.C., Fayek M., Clark C.M., Grice J.D. and Henry D.J. (2022) Uvite, CaMg3(Al5Mg)(Si6O18)(BO3)3(OH)3(OH), a new, but long-anticipated

mineral species of the tourmaline supergroup from San Piero in Campo (Elba Island, Italy). *Mineralogical Magazine* 86, 767–776. https://doi.org/10.1180/mgm.2022.54

4. **Abdu, Y.A.** (2021) Carbonaceous-chondrite inclusions in the Kapoeta achondritic meteorite studied by Mössbauer spectroscopy. *Hyperfine Interactions* 242, 5. https://doi.org/10.1007/s10751-021-01729-3
5. **Abdu, Y.A.** (2021) Raman micro-spectroscopy of nanodiamonds from the Kapoeta meteorite. *Diamond and Related Materials* 118, 108536. https://doi.org/10.1016/j.diamond.2021.108536
6. Khurshid H., **Abdu Y.A.**, Devlin E., Issa B.A. and Hadjipanayis G.C. (2020) Chemically synthesized nanoparticles of iron and iron-carbides. RSC Advances 10, 28958-28964. https://doi.org/10.1039/D0RA02996C
7. Camacho A., Lee J.K.W., Zhao J., **Abdu Y.A.**, Fayek M. and Creaser R.A. (2020) A test of the interlayer ionic porosity model as a measure of argon diffusivity in trioctahedral micas. *Geochimica et Cosmochimica Acta* 288, 341-368. https://doi.org/10.1016/j.gca.2020.07.041
8. **Abdu Y.A.** (2019) Near-infrared spectroscopy of Ca-rich clinopyroxenes revisited: A new interpretation of anomalous type-B spectra and implications for remote sensing of inner solar system bodies. *Journal of Physics: Conf. Series* 1258, 012030. DOI: 10.1088/1742-6596/1258/1/012030
9. Cooper M.A., Hawthorne F.C., **Abdu Y.A.**, Walford P.C. and Back M.E. (2019) Relative humidity as a driver of structural change in three new ferric-sulfate-tellurite hydrates: New minerals tamboite and metatamboite, and a lower-hydrate derivative, possibly involving direct uptake of atmospheric {H2O}4 clusters. *Canadian Mineralogist* 57, 605-635. https://doi.org/10.3749/canmin.1900001
10. Filho L.A.D.M., Chaves M.L.S.C., Cooper M.A., Ball N.A., **Abdu Y.A.**, Sharpe R., Day M.C. and Hawthorne F.C. (2019) Brandãoite, $[BeAl_2(PO_4)_2(OH)_2(H_2O)_4](H_2O)$, a new Be-Al-phosphate mineral from the João Firmino mine, Pomarolli farm region, Divino das Laranjeiras County, Minas Gerais State, Brazil: description and crystal structure. *Mineralogical Magazine* 83, 261-267. https://doi.org/10.1180/mgm.2018.121
11. **Abdu Y.A.**, Hawthorne F.C. and Varela M.E. (2018) Infrared spectroscopy of carbonaceous-chondrite inclusions in the Kapoeta meteorite: discovery of nanodiamonds with new spectral features and astrophysical implications. *The Astrophysical Journal Letters* 856, L9 (7 pp). DOI: https://doi.org/10.3847/2041-8213/aab433
12. Cámara F., Curetti N., Benna P., **Abdu Y.A.**, Hawthorne F.C. and Ferraris C. (2018) The effect of type-B carbonate content on the elasticity of fluorapatite. *Physics and Chemistry of Minerals* 45, 789–800. https://doi.org/10.1007/s00269-018-0962-1
13. Cooper M.A., Raade G., Ball N.A., **Abdu Y.A.**, Hawthorne F.C. and Rowe R. (2018) Folvikite, $Sb^{5+}Mn^{3+}(Mg,Mn^{2+})_{10}O_8(BO_3)_4$, a new oxyborate mineral from the Kitteln mine, Nordmark ore district, Värmland, Sweden: description and crystal structure. *Mineralogical Magazine* 82, 821–836. https://doi.org/10.1180/minmag.2017.081.059
14. Hawthorne F.C., Wise M.A., Černý P., **Abdu Y.A.**, Ball N.A., Pieczka A. and Włodek A. (2018) Beusite-(Ca), ideally $CaMn^{2+}{}_2(PO_4)_2$, a new graftonite-group mineral from the Yellowknife pegmatite field, Northwest Territories, Canada: Description and crystal structure. *Mineralogical Magazine* 82, 1323–1332. https://doi.org/10.1180/mgm.2018.120

15. Pieczka A., Frank C. Hawthorne F.C., Ball N., **Abdu Y.**, Gołębiowska B., Włodek A. and Żukrowski J. (2018) Graftonite-(Mn), ideally M1MnM2,M3Fe2(PO4)2, and graftonite-(Ca), ideally M1CaM2,M3Fe2(PO4)2, two new minerals of the graftonite group from Poland. *Mineralogical Magazine* 82, 1307-1322.

16. Susta U., Della Ventura G., Hawthorne F.C., **Abdu Y.A.**, Day M.C., Mihailova B., Oberti R. (2018) The crystal-chemistry of riebeckite, ideally $Na_2Fe^{2+}{}_3Fe^{3+}{}_2Si_8O_{22}(OH)_2$: a multi-technique study. *Mineralogical Magazine* 82, 837-852. DOI:10.1180/minmag.2017.081.064.

17. **Abdu Y.A.** and Hawthorne F.C. (2017) Mössbauer spectroscopy of pyroxene in the light-dark structure of the Kapoeta meteorite: implications for thermal history of the Kapoeta parent body. *Journal of Physics: Conf. Series 869 (2017) 012096.* DOI:10.1088/1742-6596/869/1/012096.

18. Varela M. E., Hwang S-L., Shen P., Chu H-T., Yui T-F., Iizuka Y., Brandstaetter F. and **Abdu Y. A.** (2017) Olivinites in the angrite D'Orbigny. *Geochimica et Cosmochimica Acta* 217, 349–364.

19. Zhitova E.S. , Krivovichev S.V., Hawthorne F.C., Krzhizhanovskaya M.G., Zolotarev A.A., **Abdu Y.A.**, Yakovenchuk V.N., Pakhomovsky Y.A., Goncharov A.G. (2017) High-temperature behaviour of astrophyllite, $K_2NaFe_7^{2+}Ti_2(Si_4O_{12})_2O_2(OH)_4F$: a combined X-ray diffraction and Mössbauer spectroscopic study. *Physics and Chemistry of Minerals* 44 (8), 595–613. DOI: 10.1007/s00269-017-0886-1

20. Cámara F., Sokolova E., **Abdu Y.A.**, Hawthorne F.C., Charrier T., Dorcet V. and Carpentier J.-F. (2017) Fogoite-(Y), $Na_3Ca_2Y_2Ti(Si_2O_7)_2OF_3$, a Group-I TS-block mineral from the Lagoa do Fogo, the Fogo volcano, São Miguel Island, the Azores: Description and crystal structure. *Mineralogical Magazine* 81, 369-381.

21. Lussier A.J., Hawthorne F.C., **Abdu Y.A.**, Ball N.A., Tait K.T., Back M.E., Steede A.H., Taylor R. and Mcdonald A.M. (2017) Ferro-ferri-nybøite from Mont Saint-Hilaire, Québec, Canada: Correction. *Canadian Mineralogist* 55(3), 515-516.

22. Cámara F., Sokolova E., **Abdu Y.A.**, and Pautov L.A. (2016) From structure topology to chemical composition. XIX. Titanium silicates: revision of the crystal structure and chemical formula of bafertisite, $Ba_2Fe^{2+}4Ti_2(Si_2O_7)_2O_2(OH)_2F_2$, a group-II TS-block mineral. *Canadian Mineralogist* 54, 49-63.

23. Agakhanov A.A., Pautov L.A., Sokolova E., **Abdu Y.A.**, Hawthorne F.C., and Karpenko V.Y.(2016) Two astrophyllite-supergroup minerals, bulgakite and nalivkinite: bulgakite, a new mineral from the darai-pioz alkaline massif, Tajikistan and revision of the crystal structure and chemical formula of nalivkinite. *Canadian Mineralogist* 54, 33-48.

24. Cooper M.A., **Abdu Y.A.**, Hawthorne F.C. and Kampf A.R. (2016): The crystal structure of gianellaite, $[(NHg_2)_2](SO_4)(H_2O)_x$, a framework of (NHg_4) tetrahedra with ordered (SO_4) groups in the interstices. *Mineralogical Magazine* 80, 869-875.

25. Heaveysege D., **Abdu Y.A.** and Hawthorne F.C. (2015) Long-range and short-range order in gem pargasite from Myanmar: crystal-structure refinement and infrared spectroscopy. *Canadian Mineralogist* 53, 497-510.

26. Sokolova E., **Abdu Y.**, Hawthorne F.C., Genovese A., Cámara F., and Khomyakov A.P. (2015) From structure topology to chemical composition. XVIII. Titanium silicates: revision of the crystal structure and chemical formula of betalomonosovite, a group-IV

mineral from the Lovozero alkaline massif, Kola peninsula, Russia. *Canadian Mineralogist* 53, 401-428.

27. Sokolova E., Cámara F., **Abdu Y.A.**, Hawthorne F.C., Horvath L. and Pfenninger-Horvath E. (2015) Bobshannonite, NazKBa(Mn, Na)$_8$(Nb,Ti)$_4$(Si$_2$O$_7$)$_4$O$_4$(OH)$_4$(O, F)$_2$, a new TS-block mineral from Mont Saint-Hilaire, Québec, Canada: Description and crystal structure. *Mineralogical Magazine* 79, 1791-1811.
28. Chakhmouradian A.R., Cooper M.A., Medici L., **Abdu Y.A.** and Shelukhina, Y.S. (2015) Anzaite-(Ce), a new rare-earth mineral and structure type from the Afrikanda silicocarbonatite, Kola Peninsula, Russia. *Mineralogical Magazine* 79, 1231–1244.
29. Agakhanov A.A., Pautov L.A., Karpenko V.Y., Sokolova E., **Abdu Y.A.**, Hawthorne F.C., Pekov I.V., and Siidra O.I. (2015) Yusupovite, Na$_2$Zr(Si$_6$O$_{15}$)(H$_2$O)$_3$, a new mineral species from the Darai-Pioz alkaline massif and its implications as a new microporous filter for large ions. *American Mineralogist* 100, 1502-1508.
30. Luo J.C., Hu R.Z., Fayek M., Li C.S., Bi X.W., **Abdu Y.** and Chen Y.W. (2015) In-situ SIMS uraninite U-Pb dating and genesis of the Xianshi granite-hosted uranium deposit, South China. *Ore Geology Reviews* 65, 968-978.
31. Pautov L.A., Agakhanov A.A., Sokolova E., Hawthorne F.C., Karpenko V.Y., Siidra O.I., Garanin V.K. and **Abdu Y.A.** (2015) Khvorovite, (Pb^{2+},Ba,K)$_4$ Ca2[Si$_8$B$_2$(SiB)O$_{28}$]F, a new hyalotekite-group mineral from the Darai-Pioz alkaline massif, Tajikistan: Description and crystal structure. *Mineralogical Magazine* 79, 949–963.
32. Gismelseed A.M., **Abdu Y.A**., Shaddad M.H., Verma H.C. and Jenniskens P. (2014) Fe-bearing phases in a ureilite fragment from the asteroid 2008 TC3 (= Almahata Sitta meteorites): A combined Mössbauer spectroscopy and X-ray diffraction study. *Meteoritics and Planetary Science* 49, 1485-1493.
33. Hawthorne F.C, **Abdu Y.A.**, Ball N.A., Černý P. and Kristiansen R. (2014) Agakhanovite-(Y), ideally (YCa)□$_2$KBe$_3$Si$_{12}$O$_{30}$, a new milarite-group mineral from the Heftetjern Pegmatite, Tørdal, Southern Norway: Description and crystal structure. *American Mineralogist* 99, 2084–2088.
34. Cámara F., Sokolova E., **Abdu Y.A.** and Hawthorne F.C. (2014) Nafertisite, Na$_3$Fe$^{2+}_{10}$Ti$_2$(Si$_6$O$_{17}$)$_2$O$_2$(OH)$_6$F(H$_2$O)$_2$, from Mt. Kukisvumchorr, Khibiny alkaline massif, Kola peninsula, Russia: Refinement of the crystal structure and revision of the chemical formula. *European Journal of Mineralogy* 26, 689–700.
35. Cámara F., Sokolova E., **Abdu Y.A.** and Hawthorne F.C. (2014) Saamite, Ba□TiNbNa$_3$Ti(Si$_2$O$_7$)$_2$O$_2$(OH)$_2$(H$_2$O)$_2$, a group-III Ti-disilicate mineral from the Khibiny alkaline massif, Kola peninsula, Russia: Description and crystal structure. *Canadian Mineralogist* 52, 745-762.
36. Lussier A.J., Hawthorne F.C., **Abdu Y.A.**, Ball N.A., Tait K.T., Back M.E., Steede A.H., Taylor R. and Mcdonald A.M. (2014) Ferro-ferri-nybøite, NaNa$_2$(Fe$^{2+}_3$Fe$^{3+}_2$)Si$_8$O$_{22}$(OH)$_2$, a new clinoamphibole from Mont Saint-Hilaire, Québec, Canada: description and crystal structure. *Canadian Mineralogist* 52, 1019-1026.
37. Chakhmouradian A.R., Cooper M.A., Ball N., Reguir E.P., Medici L., **Abdu Y.A.** and Antonov A.A. (2014) Vladykinite, Na$_3$Sr$_4$(Fe^{2+}Fe^{3+})Si$_8$O$_{24}$: a new complex sheet silicate from peralkaline rocks of the Murun complex, eastern Siberia, Russia. *American Mineralogist* 99, 235-241.

38. **Abdu Y.A.** and Hawthorne F.C. (2013) Local structure in C2/c clinopyroxenes on the hedenbergite ($CaFeSi_2O_6$)-ferrosilite ($Fe_2Si_2O_6$) join: A new interpretation for the Mössbauer spectra of Ca-rich C2/c clinopyroxenes and implications for pyroxene exsolution. *American Mineralogist* 98, 1227-1234.

39. Cooper M.A., **Abdu Y.A.**, Hawthorne F.C. and Kampf A.R. (2013) The crystal structure of comancheite, $Hg^{2+}_{55}N^{3-}_{24}(OH,NH_2)_4(Cl,Br)_{34}$, and crystal-chemical and spectroscopic discrimination of N^{3-} and O^{2-} anions in Hg^{2+} compounds. *Mineralogical Magazine* 77, 3217-3237.

40. Hawthorne F.C, **Abdu Y.A.**, Ball N.A. and Pinch W.W. (2013). Carlfrancisite: $Mn^{2+}_3(Mn^{2+},Mg,Fe^{3+},Al)_{42}[As^{3+}O_3]_2(As^{5+}O_4)_4[(Si,As^{5+})O_4]_6[(As^{5+},Si)O_4]_2(OH)_{42}$, a new arseno-silicate mineral from the Kombat mine, Otavi Valley, Namibia. *American Mineralogist* 98, 1693-1696.

41. Hawthorne F.C., **Abdu Y.A.** and Tait K.T. (2013) Hydrogen bonding in the crystal structure of legrandite: $Zn_2(AsO_4)(OH)(H_2O)$. *Canadian Mineralogist* 51, 233-241.

42. Hawthorne F.C., **Abdu Y.A.,** Tait, K.T. and Back, M.E. (2013) The crystal structure of yofortierite. *Canadian Mineralogist* 51, 243-251.

43. Sokolova E., Hawthorne F.C. and **Abdu Y.A.** (2013) From structure topology to chemical composition. XV. Titanium silicates: Revision of the crystal structure and chemical formula of schüllerite, $Na_2Ba_2(Fe^{2+}Mg)Ti_2(Si_2O_7)_2O_2F_2$, from the Eifel volcanic region, Germany. *Canadian Mineralogist* 51, 715-725.

44. Cámara F., Sokolova E., **Abdu Y.**, Hawthorne F.C. and Khomyakov A.P. (2013) Kolskyite, $(Ca□)Na_2Ti_4(Si_2O_7)_2O_4(H_2O)_7$, a Group-IV Ti-disilicate mineral from the Khibiny alkaline massif, Kola Peninsula, Russia: description and crystal structure. *Canadian Mineralogist* 51, 921-936.

45. Cooper M.A., Husdal T.A., Ball N.A., **Abdu Y.A.** and Hawthorne F.C. (2013) Schlüterite-(Y), ideally $(Y,REE)_2Al(Si_2O_7)(OH)_2F$, a new mineral species from the Stetind pegmatite, Tysfjord, Nordland, Norway: Description and crystal structure. *Mineralogical Magazine* 77, 353-366.

46. Ng R., Alexandre P., Kyser K., Cloutier J., **Abdu Y.A.**, and Hawthorne F.C. (2013) Oxidation state of Fe in alteration minerals associated with sandstone-hosted unconformity-related uranium deposits and apparently barren alteration systems in the Athabasca Basin, Canada: Implications for exploration. *Journal of Geochemical Exploration* 130, 22-43.

47. Cooper M.A., Hawthorne F.C., **Abdu Y.A.**, Ball N.A., Ramik R. and Tait K.T. (2013) Wopmayite, ideally $Ca_6Na_3□Mn(PO_4)_3(PO_3OH)_4$, a new phosphate mineral from the Tanco mine, Bernic lake, Manitoba: Description and crystal structure. *Canadian Mineralogist* 51, 93-106.

48. Bosi F., Andreozzi G.B., Skogby H., Lussier A.J., **Abdu Y.** and Hawthorne F.C. (2013) Fluor-elbaite, $Na(Li_{1.5}Al_{1.5})Al_6(Si_6O_{18})(BO_3)_3(OH)_3F$, a new mineral species of the tourmaline supergroup. *American Mineralogist* 98, 297-303.

49. Hawthorne F.C., Cooper M.A., Ball N.A., **Abdu Y.A.**, Cerny P., Cámara F. and Laurs B.M. (2013) Erratum: Billwiseite, ideally $Sb^{3+}_5(Nb,Ta)_3WO_{18}$, a new oxide mineral species from the Stak Nala pegmatite, Nanga Parbat-Haramosh massif, Pakistan: Description and crystal structure (Canadian Mineralogist 50:4 (805-814)). *Canadian Mineralogist* 51, 192-192.

50. Cooper M.A, **Abdu Y.A.**, Ball N.A., Černý P., Hawthorne F.C. and Kristiansen R. (2012) Aspedamite, ideally □$_{12}$(Fe^{3+},Fe^{2+})$_3$Nb$_4$[Th(Nb,Fe^{3+})$_{12}$O$_{42}$] {(H2O),(OH)}$_{12}$, a new heteropolyniobate mineral species from the Herrebøkasa Quarry, Aspedammen, Østfold, southern Norway: Description and crystal structure. *Canadian Mineralogist* 50, 793-804.

51. Cooper M.A., **Abdu Y.A.**, Ball N.A., Hawthorne F.C., Back M.E., Tait K.T., Schluter J., Malcherek T., Pohl D. and Gebhard G. (2012) Ianbruceite, ideally [Zn$_2$(OH)(H$_2$O)(AsO$_4$)](H$_2$O)$_2$, a new arsenate mineral from the Tsumeb mine, Otjikoto (Oshikoto) Region, Namibia: Description and crystal structure. *Mineralogical Magazine* 76, 1119-1131.

52. Hawthorne F.C., Cooper M.A., **Abdu Y.A.**, Ball N.A., Back M.E. and Tait K.T. (2012) Davidlloydite, ideally Zn$_3$(AsO$_4$)$_2$(H$_2$O)$_4$, a new arsenate mineral from the Tsumeb Mine, Otjikoto (Oshikoto) region, Namibia: description and crystal structure. *Mineralogical Magazine* 76, 45-57.

53. Hawthorne F.C., Cooper M.A., Ball N.A., **Abdu Y.A.**, Cerny P., Cámara F. and Laurs B.M. (2012) Billwiseite, ideally Sb$^{3+}_5$(Nb,Ta)$_3$WO$_{18}$, a new oxide mineral species from the Stak Nala pegmatite, Nanga Parbat-Haramosh massif, Pakistan: Description and crystal structure. *Canadian Mineralogist* 50, 805-814.

54. Lanteigne S., Schindler M., McDonald A.M., Skeries K., **Abdu Y.**, Mantha N.M., Murayama M., Hawthorne, F.C., Hochella Jr. M.F. (2012) Mineralogy and weathering of smelter-derived spherical particles in soils: Implications for the mobility of Ni and Cu in the surficial environment. *Water, Air and Soil Pollution* 223, 3619-3641

55. Camacho A., Lee J.K.W., Fitz Gerald J.D., Zhao J., **Abdu Y.A.**, Jenkins D.M., Hawthorne, F.C., Kyser T.K., Creaser R.A., Armstrong R. and Heaman L.W. (2012) Planar defects as Ar traps in trioctrahedral micas: A mechanism for increased Ar retentivity in phlogopite. *Earth and Planetary Science Letters* 341-344, 255-267.

56. **Abdu Y.A.**, Hull S.K, Fayek M. and Hawthorne F.C. (2011) The turquoise-chalcosiderite Cu(Al,Fe^{3+})$_6$(PO$_4$)$_4$(OH)$_8$.4H$_2$O solid solution series: A Mössbauer spectroscopy, XRD, EMPA and FTIR study. *American Mineralogist* 96, 1433-1442.

57. Lussier A.J., **Abdu Y.**, Hawthorne F.C., Michaelis V.K., Aguiar P.M. and Kroeker S. (2011) Oscillatory zoned liddicoatite from Anjanabonoina, central Madagascar. I. Crystal chemistry and structure by SREF and ^{11}B and ^{27}Al MAS NMR spectroscopy. *Canadian Mineralogist* 49(1), 63-88.

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Conference Abstracts

1. **Abdu Y. A.** Infrared Spectroscopic Evidence of Benzonitrile in Carbonaceous-Chondrite Material from the Kapoeta Meteorite. 85th Annual Meeting of the Meteoritical Society**,** August 14-19, **2022**, Glasgow, Scotland. *Meteoritics and Planetary Science* 57, S1.
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3. **Abdu Y. A.** Near-infrared spectroscopy of Ca-rich clinopyroxenes revisited: A new interpretation of anomalous type-B spectra and implications for remote sensing of inner solar system. 1st Sharjah International Conference on Particle Physics, Astrophysics and Cosmology (FISICPAC), Nov.11-13, **2018**, Sharjah, UAE.

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2. **Abdu Y.**A., Pretorius P.J., and Hawthorne F.C. Mössbauer characterization of low temperature iron-based Fischer-Tropsch catalysts. In progress.
3. **Abdu Y.A.** Infrared Spectroscopic Evidence of Benzonitrile in Carbonaceous-Chondrite Material from the Kapoeta Meteorite. In progress.
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