6. Publications List – Victor Y. Zenou

6.1 Peer reviewed journals

6.1.1 V.Y. Zenou, F. Bertolotti, A. Guagliardi, B.H. Toby, R.B. Von Dreele and S. Bakardjieva, "In situ high-temperature X-ray diffraction study of Sc-doped titanium oxide nanocrystallites", J. of applied crystallography, **53** pp. 1452-1461 (2020).

6.1.2 S. Bakardjieva, J. Mares, R. Fajgar, V.Y. Zenou, M. Maleckova, E. Chatzisymeon, H. Bibova and J. Jirkovsky, "The relationship between microstructure and photocatalytic behavior in lanthanum-modified 2D TiO_2 nanosheets upon annealing of a freeze-cast precursor, RSC Advances, **9** pp. 22988-23003 (2019).

6.1.3 V.Y. Zenou and S. Bakardjieva, "Microstructural analysis of undoped and moderately Sc-doped TiO_2 anatase nanoparticles using Scherrer equation and Debye function analysis", Materials Characterization, **144** pp. 287-296 (2018).

6.1.4 V. Y. Zenou, G. Rafailov, I. Dahan, A. Kiv, L. Meshi and D. Fuks, "Ordered $U(Al,Si)_3$ phase: Structure and bonding", J. of Alloys and Compounds **690**, pp. 884-889 (2017).

6.1.5 V. Y. Zenou, D.E. Fowler, R. Gautier, S.A. Barnett, K.R. Poeppelmeier and L.D. Marks, "Redox and phase behavior of Pd-substituted $(La,Sr)CrO_3$ perovskite solid oxide fuel cell anodes", Solis State Ionics **296**, pp. 90-105 (2016).

6.1.6 Z. Gao, V.Y. Zenou, D. Kennouche, L.D. Marks and S.A. Barnett, "Solid oxide cells with zirconia /ceria Bi-Layer electrolytes fabricated utilizing reduced-temperature firing", J. of Materials chemistry A **3**, pp. 9955-9964 (2015).

6.1.7 V. Y. Zenou and G.L. Cascarano, "Determination of the crystal structure of $U_6Fe_5Al_8Si_9$ by electron crystallography", J. of Physics and Chemistry of Solids **74**, pp. 1868-1874 (2013).

6.1.8 V. Y. Zenou, D. Fuks and M. Talianker, "Determination of the crystallographic and electronic structure of $U_2Fe_3Si_5$ compound", J. of Alloys and Compounds **529**, pp. 122-127 (2012).

6.1.9 V. Y. Zenou, D. Fuks and M. Talianker, "Determination of the crystallographic structure of the new $U_6Fe_5Al_8Si_9$ compound", Intermetallics **19**, pp. 1930-1935 (2011).

6.1.10 V. Y. Zenou, L. Meshi and D. Fuks, "Why UFe_xAl_{12-x} does not crystallize with $ThMn_{12}$-structure type, when x=2?", Intermetallics **19**, pp. 713-720 (2011).

6.1.11 V. Y. Zenou, V. Ezersky, L. Meshi, D. Fuks and M. Talianker, "New Orthorhombic phase in U-Fe-Al-Si system", J. of Alloys and Compounds **509**, pp. 206-209 (2011).

6.1.12 S. Liu, V.Y. Zenou, I. Sus, T. Kotani, M. van Schilfgaarde and N. Newman, "Structure-dielectric property relationship for vanadium and scandium-doped barium strontium titanate", Acta Materialia, **55**, pp. 2647–2657 (2007).

6.1.13 A. Kiv, D. Fuks, A. Munitz, V. Zenou and N. Moiseenko, "Radiation-stimulated diffusion in Al–Si alloys", Radiation Effects & Defects in Solids, **162 (2)**, pp. 56-67 (2007).

6.1.14 H. Liu, S. Liu, V.Y. Zenou, C. Beach and N. Newman, "Structural, Dielectric and Optical Properties of Ni-doped Barium Cadmium Tantalate Ceramics", Jpn. J. Applied Physics, **45(12)**, pp. 9140–9142 (2006).

6.1.15 V.Y. Zenou, A. Kiv, D. Fuks, V. Ezerski and N. Moiseenko, "The microscopic mechanism of silicon precipitation in Al/Si system", Materials Science and Engineering A, **435–436**, pp. 556–563 (2006).

6.1.16 I. Halevy, V.Y. Zenou, S. Salhov, E.N. Caspi, W. Schäfer and I. Yaar, "High pressure study of the intermetallic compound UFe_2Al_{10}", J. of Alloys and Compounds, **419**, pp. 21-24 (2006).

6.1.17 L. Meshi, V. Zenou, V. Ezersky, A. Munitz and M. Talianker, "Tetragonal phase in Al-rich region of U–Fe–Al system", J. of Alloys and Compounds, **402**, pp. 84–88 (2005).

6.1.18 V.Y. Zenou, "Lorentz microscopy and giant magnetoresistance of nanostructured heterogeneous Au–Co alloys", J. of Applied Physics, **98**, pp. 074301(1) ÷ 074301(10) (2005).

6.1.19 V.Y. Zenou, G. Kusinski, L. Yue and G. Thomas, "Structure and magnetic properties of nano-structured heterogeneous Au-Co alloys", J. of Materials Science, **38(12)**, pp. 2679-2688 (2003).

6.1.20 L. Meshi, V.Y. Zenou, V. Ezersky, A. Munitz and M. Talianker, "Identification of the structure of new Al-U-Fe phase by electron microdiffraction technique", J. of Alloys and Compounds, **347**, pp. 178-183 (2002).

6.1.21 V.Y. Zenou, G. Kimmel, C. Cotler and M. Aizenshtein "Structure of UAl_4 prepared by solid state reaction", J. of Alloys and Compounds, **329**, pp. 189-194 (2001).

6.1.22 A. Munitz, V.Y. Zenou, M. Talianker and C. Cotler, "The impact of cooling rates on the microstructure of Al-U alloys", Metallurgical and materials transactions A, **28**, pp. 1035-1046 (1997).

6.2 Conference proceedings

6.2.1 E. Elias, S. Fink Ilyasafov, V.Y. Zenou, G. Zamir, I. Dahan, R.Z. Schneck, "The effect of nitrogen / hydrogen doping on the helium migration in plasma – facing materials", The 19th Israel Materials Engineering Conference (IMEC20210), December 13-14 (2021) Jerusalem, Israel.

6.2.2 S. Fink Ilyasafov, N. Maman, V.Y. Zenou, G. Zamir, I. Dahan, R.Z. Schneck, "Prior implantation of hydrogen as a mechanism to delay helium bubbles and blisters in titanium", The 19th Israel Materials Engineering Conference (IMEC20210), December 13-14 (2021) Jerusalem, Israel

6.2.3 D. Shtuckmeyster, N. Maman, V.Y. Zenou, G. Zamir, I. Dahan, R.Z. Schneck, "The dependence of sputtering and surface erosion on grain crystallographic orientation due to helium implantation", The 19th Israel Materials Engineering Conference (IMEC20210), December 13-14 (2021), Jerusalem, Israel.

6.2.4 S. Bakardjieva and V. Zenou, "Sc doped TiO_2 nanocrystals with core-shell morphology", IUCr 2021, Acta Cryst. **A77** C987 (2021).

6.2.5 S. Bakardjieva, R. Klie, V.Y. Zenou, M. Klementova, S. Adamec, "Reduced Magneli layers on Anatase TiO_2 nanocrystals surface revealed by HAADF STEM imaging", Micros. Microanal. 26(S2), Microscopy Society of America, pp. 2674-2676, Cambridge University Press (2020/8). Doi: 10.1017/S1431927620022394.

6.2.6 S. Bakardjieva, R. Fajgar, V.Y. Zenou, H. Bibova, E. Chatzisymeon, R. Nikolova, "Effect of La additive on the morphology and photocatalytic performance of 2D TiO_2 nanosheets: degradation of 4 chlorophenol", Micros. Microanal. 25 (suppl 2) 2019. Microscopy Society of America, 2230-2231. Doi: 10.1017/S1431927619011887.

6.2.7 V.Y. Zenou, S. Bakardjieva, S. Adamec, "Sc-doped TiO_2 nanoparticles before and after annealing at 800°C", 11th International conference on advanced nano materials, ANM2018, July 16-18 (2018), Aveiro, Purtogal.

6.2.8 S. Bakardjieva, M. Maleckova, D. Niznansky, L. Osterlund, V. Zenou, "The effect of incorporation of La_2O_3 nanoparticles on photocatalytic activity of TiO_2", 10th European meeting on solar chemistry and photocatalysis: environmental applications (SPEA10), June 4-8 (2018), Almeria, Spain.

6.2.9 N. Ophek, G. Yaniv, S. Krylyuk, A.V. Davydov, V.Y. Zenou, D. Fuks, L. Meshi, "Structural investigation of the $MoTe_2$ phases", The 18th Israel Materials Engineering Conference (IMEC18), February 6-8 (2018), Dead sea, Israel.

6.2.10 V.Y. Zenou, S. Bakardjieva, "Scandium doped TiO_2 nanoparticles: microstructure and physical properties", The 18th Israel Materials Engineering Conference (IMEC18), February 6-8 (2018), Dead sea, Israel.

6.2.11 G. Rafailov, V. Zenou, I. Dahan, L. Meshi, D. Fuks, "Additional evaluation of ordered $U(Al,Si)_3$ crystal structure using first principals calculations", European research reactor conference RRFM & IGORR, March 13-17, Berlin, Germany (2016).

6.2.12 V. Y. Zenou, D.E. Fowler, S.I. Baik, K.R. Poeppelmeier, S.A. Barnett, D.N. Seidman, L.D. Marks, "Pd substituted $(La,Sr)CrO_3$ perovskite as anode material for solid oxide fuel cell application", Proceeding of the 49th annual meeting of the Israel society for microscopy, May 17-18, Bar-Ilan University, Israel (2015).

6.2.13 V.Y. Zenou, Z. Gao, D. Kennouche, L.D. Marks, S.A. Barnett, "Investigation of the Solid oxide cells with zirconia /ceria Bi-Layer electrolytes fabricated utilizing reduced-temperature firing", Proceeding of the 49th annual meeting of the Israel society for microscopy, May 17-18, Bar-Ilan University, Israel (2015).

6.2.14 V. Y. Zenou, G.L. Cascarano, Solving the crystal structure of $U_6Fe_5Al_8Si_9$ by electron crystallography, International school on Fundamental Crystallography, Brazil December 2012.

6.2.15 V. Y. Zenou, D. Fuks, M. Talianker, "Crystallographic structure and electronic properties of new $U_6Fe_5Al_8Si_9$ compound", The 15th Israel materials Engineering Conference, February 28-March 1, Dead sea, Israel (2012).

6.2.16 E. Brosh, R.Z. Shneck, A. Kiv, V.Y. Zenou, A. Munitz, "Radiogenic silicon precipitates in neutron-irradiated aluminium", Israeli Nuclear societies conference, March 2006, Dead sea, Israel (2006).

6.2.17 I. Halevy, V.Y. Zenou, S. Salhov, E.N. Caspi, H. Ettedgui, I. Yaar, "High-pressure study of the intermetallic compound UFe_2Al_{10}", Proceeding of the XIII international Conference on Hyperfine Interactions, August 23-27 2004, Bonn (2004).

6.2.18 I. Halevy, V.Y. Zenou, S. Salhov, I. Yaar, W. Schafer, "High-pressure studies of the Tetragonal to Orthorhombic transition in the UFe_xAl_{12-x} (x=7, 5, 2)", Proceeding of the 34^{émes} Journées des Actenides, April 17-20 2004, Heidelberg, Germany (2004).

6.2.19 V.Y. Zenou, Z. Livne, A. Venkert "Microstructure evaluation of 18% Ni maraging steel", Proceeding of the 36th annual meeting of the Israel society for microscopy, 30 April-2 May 2002, Eilat, Israel (2002).

6.2.20 I. Halevy, V.Y. Zenou, E. Sterer, G. Kimmel, M. Aizenshtein, I. Yaar, "Ambient and high-pressure structure of UAl_4 prepared by solid-state reaction", Proceeding of the 32^{émes} Journées des Actenides, March 19-22 2002, Ein-Gedi, Israel (2002).

6.2.21 L. Meshi, V.Y. Zenou, V. Ezersky, A. Munitz, M. Talianker, "Investigation of the structure of new ternary phase in Al-Fe-U alloy", Proceeding of the 10th Israel materials engineering Conference, February 5-7 2002, Dead sea, Israel (2002).

6.2.22 V.Y. Zenou, V. Markovich, G. Kusinski, E. Girt and G. Thomas, "Microstructure and magnetoresistance of nano-structured heterogeneous Au-Co alloys", Proceeding of the 10th Israel materials Engineering Conference, February 5-7 2002, Dead sea, Israel (2002).

6.2.23 L. Meshi, V. Ezersky, V.Y. Zenou, A. Munitz, M. Talianker, "TEM investigation of new ternary phase in Al-Fe-U alloy", Proceeding of the 35th annual meeting of the Israel society for microscopy, May 15, Technion (2001). http://www.technion.ac.il/technion/materials/ism/ism2001.html

6.2.24 V.Y. Zenou, A. Munitz, M. Talianker and C. Cotler, "Microstructure of very slowly cooled (3 X 10^{-2} K/sec) Al-U alloys made from Al-1050 or pure Al", Proceeding of the 32nd annual meeting of the Israel society for microscopy, June 11 1998, Weizmann Institute of Science, Israel (1998).

6.2.25 V.Y. Zenou, A. Munitz, M. Talianker and C. Cotler, "Microstructure of very slowly cooled (3 X 10^{-2} K/sec) Al-U alloys made from Al-1050 or pure Al", Proceeding of the 8th Israel materials engineering conference, April 16-17 1997, Beer-Sheva, Israel (1997).

6.2.26 V. Zenou, A. Munitz, "Solidification of slowly cooled Al-U alloys", Solidification seminar, June 1992, Shefayim, Israel.

6.2.27 A. Munitz, V. Zenou, I. Dahan, C. Cotler, and E. Nechama, "Solidification characteristics of slowly cooled Al-U", Proceeding of the 5th Israel materials engineering conference, ed' by M. Bamberger & M. Schorr, Freund publishing house, December 19-20 1990, pp. 371-382, Haifa, Israel (1991).

6.2.28 V. Zenou, A. Munitz, C. Cotler, C. Sacham and Z. Barkai, "Solidification of Al-Ta alloys under high cooling rates", Proceeding of the 5th Israel materials engineering conference, ed' by M. Bamberger & M. Schorr, Freund publishing house, December 19-20 1990, pp. 345-349, Haifa, Israel (1991).

6.3 Others

I'm co-Author of the following *ICDD* (International Crystallographic Diffraction Data) cards, based on crystals that I have investigated:

	#	Chemical Formula
6.3.1	00-050-1516	Al_4U
6.3.2	00-051-1291	Ga_4La
6.3.3	00-054-0463	Cd_6Yb
6.3.4	00-054-0464	$Cd_{51}Yb_{14}$
6.3.5	00-055-0346	UFe_2Al_{10}
6.3.6	00-058-0276	$Al_{20}FeU_2$
6.3.7	00-058-0798	$Ba_3CdTa_2O_9$
6.3.8	00-058-0799	$(Eu_{0.4}Y_{0.6})_2O_3$
6.3.9	00-058-0800	$(Eu_{0.2}Y_{0.8})_2O_3$
6.3.10	00-058-0847	$(Eu_{0.67}Y_{0.33})_2O_3$
6.3.11	00-058-0848	$(Eu_{0.6}Y_{0.4})_2O_3$
6.3.12	00-058-0896	$(Lu_{0.9}Y_{0.1})_2O_3$
6.3.13	00-059-0040	$TmYO_3$
6.3.14	00-059-0041	$(Tm_{0.33}Y_{0.67})_2O_3$
6.3.15	00-059-0042	$(Tm_{0.1}Y_{0.9})_2O_3$
6.3.16	00-059-0043	$(Tm_{0.9}Y_{0.1})_2O_3$
6.3.17	00-059-0044	$(Tm_{0.67}Y_{0.33})_2O_3$
6.3.18	00-059-0152	$LuYO_3$
6.3.19	00-059-0153	$(Lu_{0.1}Y_{0.9})_2O_3$
6.3.20	00-059-0388	$(Lu_{0.667}Y_{0.333})_2O_3$

6.3.21	00-059-0389	$(Lu_{0.333}Y_{0.667})_2O_3$
6.3.22	00-059-0900	$GdNdY_2O_6$
6.3.23	00-060-0431	Gd_2NdYO_6
6.3.24	00-060-0432	$GdNd_2YO_6$
6.3.25	00-060-0433	$GdSmY_2O_6$
6.3.26	00-060-0434	$GdSm_2YO_6$
6.3.27	00-060-0435	Gd_2SmYO_6
6.3.28	00-060-0780	$DySmY_2O_6$
6.3.29	00-060-0781	Dy_2NdYO_6
6.3.30	00-060-0782	Dy_2SmYO_6
6.3.31	00-060-0783	$DyGd_2YO_6$
6.3.32	00-060-0784	$DyGdY_2O_6$
6.3.33	00-060-0785	$DyNdY_2O_6$
6.3.34	00-060-0786	$DySm_2YO_6$
6.3.35	00-060-0787	$NdSmY_2O_6$
6.3.36	00-062-0834	$MgTi_2O_5$
6.3.37	00-062-0835	$MgTi_2O_5$
6.3.38	00-062-0836	$MgTi_2O_5$
6.3.39	00-062-0837	$MgTiO_3$
6.3.40	00-062-0838	$MgTiO_3$
6.3.41	00-062-0839	$MgTiO_3$
6.3.42	00-062-0846	Dy_2GdYO_6
6.3.43	01-072-9305	Al_4U
6.3.44	01-080-6858	$U_2Fe_3Si_5$
6.3.45	01-083-7832	$U_6Fe_5Al_8Si_9$
6.3.46	01-086-4065	$La_{0.8}Sr_{0.2}Cr_{0.84}Pd_{0.16}O_3$
6.3.47	01-086-4066	$La_{0.8}Sr_{0.2}Cr_{0.84}Pd_{0.16}O_3$
6.3.48	01-086-4067	Pd
6.3.49	01-086-4068	Pd
6.3.50	01-086-4069	Pd
6.3.51	01-086-4070	Pd
6.3.52	01-086-4071	PdO

6.3.53	01-086-4072	PdO
6.3.54	01-086-4073	La_2O_3
6.3.55	04-013-5134	UFe_2Al_{10}
6.3.56	04-014-5989	$Ba_3CdTa_2O_9$
6.3.57	04-018-0270	$U_6Fe_5Al_8Si_9$
6.3.58	04-018-0271	$U_2Fe_3Al_{2.5}Si_{2.5}$
6.3.59	04-018-0272	$UFe_{3.5}Al_{4.25}Si_{4.25}$
6.3.60	04-018-0273	UFe_2AlSi
6.3.61	04-019-0814	$BaCd_{0.33}Ta_{0.66}Ni_{0.01}O_3$
6.3.62	04-019-0815	$Ba_3Cd_{0.965}Ta_2Ni_{0.035}O_9$
6.3.63	04-023-4694	$U_{0.92}Al_4$