הקריה למחקר גרעיני – נגב

אגף משאבי אנוש

מרכז גרעיני, מדעי וטכנולוגי, מצטיין ומוביל

ת.ד. 9001 באר שבע 84190 | פקס: 08-6568808 | טלפון: 08-6568404

-אישי-

ו' תמוז תשע"ט
09 יולי 2019

לכבוד:
פרופ' עמית קרן
ט כ נ י ו ן

שלום רב,

הנדון: דר' אלעד כספי - העלאה בדרגה

ועדת דירוג המחקר והפיתוח של הקריה למחקר גרעיני - נגב, שוקלת את קידומו של **דר' אלעד כספי** לדרגה א+. דירוג המחקר והפיתוח כולל דרגות מ-ג' עד א+ (בהקבלה לדרגות מרצה עד פרופסור מן המניין בדירוג הסגל האקדמי הבכיר). דרגה א+ מקבילה לדרגת פרופסור מן המניין. מעובד המקודם לדרגה זו נדרשת היכולת לבצע ולהוביל מחקר ופיתוח מדעי טכנולוגי ברמה המתאימה. בכלל זה יילקחו בחשבון הישגיו העצמאיים במחקר ופיתוח של המועמד, יכולתו להוביל מגמות חדשות במחקר, כושרו להגדיר משימות ולהוביל צוותים מקצועיים, ויכולתו לקיים ולפתח קשרים מקצועיים עם מוסדות מחקר ופיתוח בארץ ובחו"ל.

נכיר לך תודה אם תואיל להעריך את התאמתו של **דר' אלעד כספי** לקריטריונים אלו. הקריה למחקר גרעיני היא מוסד מחקר ופיתוח שחלק מעבודות המו"פ המבוצעות בו הן פנימיות. על כן נבקשך לבסס את הערכתך בעיקר על איכות פרסומיו של המועמד ולא על כמותם, ועל היכרותך (אם קיימת) עם עבודתו ויכולותיו.

אנו מודעים לכך שכתיבת חוות הדעת כרוכה בהשקעת זמן ומאמץ מצדך ומודים לך מראש על שיתוף הפעולה.

חוות דעתך תשמר בסודיות ותשמש לצרכי הועדה בלבד.

בברכה ,

דר' אוהד לוי
יו"ר ועדת הדירוג

August 2018

CURRICULUM VITAE

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EMPLOYMENT

2014 – present	Head, Physics Department, Nuclear Research Centre – Negev, Israel.
2013 – 2014	Senior Research Scientist, Physics Department, Nuclear Research Centre – Negev, Israel
2012 – 2013	Visiting Research Scientist, Materials Science and Engineering, Drexel University, Philadelphia PA, USA (On sabbatical leave from the Nuclear Research Centre – Negev, Israel)
2007 - 2012	Head, Laboratory of Experimental Physics, Physics Department, Nuclear Research Centre - Negev, Israel.
2003 - 2007	Researcher in the Physics Department, Nuclear Research Centre - Negev, Israel.
2001 - 2003	Postdoctoral position in the Materials Science Division, Argonne National Laboratory, Argonne IL, USA. Main subject: "Crystallography and magnetism of novel oxide materials". Supervisor: Dr. James D. Jorgensen, Argonne National Laboratory, Argonne IL, USA.
2000 - 2001	Researcher in the Physics Department, Nuclear Research Centre - Negev, Israel.

ACADEMIC TITLE

2013 – present	Visiting Research Professor, Materials Science and Engineering, Drexel University, Philadelphia PA, USA

EDUCATION

1998 - 2001	Ph.D. in Physics, The Kreitman School of Advanced Graduate Studies, Ben-Gurion University of the Negev, Beer-Sheva, Israel. Thesis: "Magnetism of A atoms in intermetallic compounds, AM_2X_2 (A = lanthanide, U; M = transition metal; X = Ge, Si)". Supervisors: Prof. H. Shaked, Ben-Gurion University of the Negev, Beer-Sheva, and Dr. M. Melamud, Nuclear Research Centre - Negev.
1995 - 1998	MSc. in Physics, Physics Dept., Ben-Gurion University of the Negev, Beer-Sheva, Israel. Research subject: "Magnetism of randomly distributed A atoms in ACo_2Ge_2 ($A = Nd_{1-x}Tb_x$; $U_{1-x}Nd_x$)". Supervisors: Prof. H. Shaked, Ben-Gurion University of the Negev, Beer-Sheva, and Dr. M. Melamud, Nuclear Research Centre - Negev.
1991 - 1995	BSc. in Physics and Materials Engineering, Cum Laude, Ben-Gurion University of the Negev, Beer-Sheva, Israel.

GRANTS

2018-	"Equipment for magnetic properties measurement of MAX/MXene and more", PAZY Foundation equipment grant (with Prof. Amit Keren, Technion).
2014-2017	"A novel liquid-xenon detector concept for combined fast-neutron and gamma imaging", PAZY Foundation research grant (with Prof. Amos Breskin, Weizmann Institute).

AWARDS AND SCHOLARSHIPS

2012	Director of the Nuclear Research Centre – Negev excellence in research award.
2011	Director of the Nuclear Research Centre – Negev note of appreciation on excellent research in annual review.
2008	Director General of the Israeli Atomic Energy Commission excellent project award (as a participant in a larger team).
2000	"Katzir" scholarship for excellence in scientific research in governmental institutes, NRCN (awarded for a period of six years).
1992	Citation of Excellency, 2nd year of undergraduate studies, Ben-Gurion University of the Negev, Beer-Sheva, Israel.
1991	Full year Excellency Scholarship, 1st year of undergraduate studies, Ben-Gurion University of the Negev, Beer-Sheva, Israel.

INVITED TALKS

2018 "*Understanding the magnetic properties of nano-laminated ternary carbides, nitrides, and norides: the role of neutron scattering*", 14th International Ceramics Congress, Perugia, Italy.

2017 "*Texture of EBM and SLM additively manufactured Ti-6Al-4V*", Israeli Physical Societies 2017, Haifa, Israel.

2014 "*Neutron diffraction evidence for Incipient Kink Band in highly textured Ti_2AlC*", 13th International Ceramics Congress, Montecatini Terme, Italy.

2013 "*Neutron diffraction evidence of IKB formation in textured Ti_2AlC MAX phase*", Materials Science and Engineering, Drexel University, Philadelphia, PA, USA; Materials Science Division, Argonne National Laboratory, Argonne, IL, USA.

2010 "*Did they fight with silver axes 4000 years ago? (Neutron diffraction study of Levantine Middle Bronze Age cast axes*", 1st bilateral workshop of the JRC-IAEC cooperation, Ein-Gedi, Israel; Department of Materials Engineering, Ben-Gurion University of the Negev, Beer-Sheva, Israel.

2003 "*Competition among charge- orbital- and spin-ordering in $(Ca_{1-x}Ce_x)MnO_3$: a complementary x-ray synchrotron and TOF neutron diffraction study*", Frontiers in powder diffraction, 2003 NSLS users' meeting, Brookhaven National Laboratoey, NY, USA.

REFEREE OF SCIENTIFIC PUBLICATIONS AND PROPOSALS

Book review *Micromagnetism and the Microstructure of Ferromagnetic Solids*, H. Kronmiiller and M. Fahnle, Materials Research Bulletin 40, 573 (2005).

Papers reviewed for: Physical Review B, Journal of Solid State Chemistry, Materials Research Bulletin, Solid State Communications, Journal of Physics Condensed Matter, Journal of Physics Conference Series, Journal of Instrumentation, Inorganic Chemistry, Materials Research Letters, Journal of the American Ceramic Society, Scientific Reports

Scientific proposals review for the neutron scattering user group of the Bragg Institute, Lucas Heights, NSW, Australia, since 2010.

MAJOR RESEARCH EXPERIENCE & INTERESTS

Neutron scattering: Investigation of the crystallographic and magnetic structures and interactions of materials; Investigation of pair distribution function of liquids; Non-destructive study of archeological artifacts; Mechanical properties of archaeological artifacts; Investigation of structural properties of biogenic materials; In-situ mechanical properties of

ceramics and metallic compounds, and their dependence of crystal structure. Characterization of AM materials.

Crystallographic, electronic, magnetic, and magnetocaloric properties of advanced ceramics, such as MAX (M=transition metal, A=A group element, X=C, or N), and MAB (B=boron) phases, and possible applications.

Structural, mechanical, and textural properties of additively manufactured (AM) materials. Comparison of different AM methods and among AM and conventional manufacturing methods.

Indirect magnetic interactions via conduction electrons, i.e. the s-f hamiltonian, RKKY interactions and Kondo effect.

Complementary experimental methods, e.g. magnetic susceptibility, SQUID magnetization, X-ray diffraction, Synchrotron X-ray diffraction NMR, etc.

Designing a Multi-detector for neutron diffraction at the IRR-II.

Designing 3 rd generation TOF neutron detector at the IPNS.

Determination of delayed neutrons source time dependence based on in pile kinetic measurements.

Special nuclear materials interrogation using active and passive nuclear methods, and novel detectors.

COLLABORATIONS (PAST and CURRENT)

Current

Prof. Emil Zolotoyabko, Faculty of Materials Engineering, Technion, Israel: *crystallographic studies of geological and biological phases.*

Dr. Sven C. Vogel, Los Alamos National Laboratory, *Characterization of additively manufactured materials.*

Prof. Michel Barsoum, Materials Science and Engineering, Drexel University, USA: *In-situ mechanical properties of ceramic and metallic compounds using neutron scattering. Crystallographic, magnetic, and electronic properties of advanced ceramics.*

Prof. Thierry Cabioc'h, Institut P', Université de Poitiers, Poitiers, France: *Characterization of novel MAX phase ceramics.*

Prof. Johanna Rosen, Department of Physics, Chemistry and Biology (IFM), Linköping University, Linköping, Sweden: *Crystallographic, magnetic, and electronic properties of advanced ceramics.*

Prof. Amit Keren, Techion, Haifa, Israel: *Crystallographic, magnetic, and electronic properties of advanced ceramics.*

Past

Prof. Martha Greenblatt, Rutgers University, NJ, USA: *Order phenomena in CMR manganites.*

Dr. Lukas Keller, SINQ Facility, Paul Scherrer Institut, Villigen, Switzerland: *Magnetic structure of intermetallic boride compounds.*

Dr. Robert von Dreele, Intense Pulsed Neutron Source, Argonne National Laboratory, Argonne, USA: *Neutron diffraction study of biogenic materials.*

Prof. Israel Felner, Racah Institute of Physics, Hebrew University, Jerusalem, Israel: *Magnetic properties of intermetallic materials.*

Profs. Shaul Goren and Hagai Shaked, Physics Department, Ben-Gurion University of the Negev, Beer-Sheva, Israel: *magnetic properties of intermetallic boride compounds.*

Dr. Maxim Avdeev, Bragg Institute, Australia Nuclear Science and Technology Organization, Sydney, Australia: *magnetic structure and properties of intermetallic boride compounds; crystallographic and magnetic properties of complex oxides.*

Dr. Brigitte Beuneu, Laboratoire Leon Brillouin, Saclay, France: *Neutron diffraction study of liquid metals.*

Dr. Raymond Osborn, Intense Pulsed Neutron Source, Argonne National Laboratory, USA: *Inelastic neutron scattering of intermetallic boride compounds.*

Prof. Sariel Shalev, Weizmann Institute & Haifa University, Israel: *Non-destructive study of archaeological artifacts.*

Dr. Bent Pedersen, and Dr. Reinhard Bemdt, PUNITA, IPSC institute, Italy: *Special nuclear material interrogation by active and passive methods.*

Prof. Amos Breskin, Weizmann Institute, Rehovot, Israel: *A novel liquid-xenon detector concept for combined fast-neutron and gamma imaging*

Nuclear Research Centre – Negev
Physics Department
El'ad N. Caspi

July 16, 2019

List of Publications

[1] A. Pesach, O. Rivin, O. Ozeri, H. Ettedgui, **E.N. Caspi**. A systematic calibration of KARL neutron diffractometer, Physics Department – NRCN report, N-2017/890-003.

[2] M. Nechiche, T. Cabioc'h, **E.N. Caspi**, O. Rivin, A. Hoser, V. Gautier-Brunet, P. Chartier, S. Dubois. Evidence for symmetry reduction in $Ti_3(Al_{1-\delta}Cu_\delta)C_2$ MAX phase solid solutions, Inorganic Chemistry 56 (2017) 14388.

[3] O. Rivin, **E.N. Caspi**, A. Pesach, H. Shaked, A. Hoser, R. Georgii, Q. Tao, J. Rosen, M.W. Barsoum. Evidence for ferromagnetic ordering in the MAX phase $(Cr_{0.96}Mn_{0.04})_2GeC$, Materials Research Letters 5 (2017) 465-471.

[4] I. Israelashvili, A.E.C. Coimbra, D. Vartsky, L. Arazi, S. Shchemelinin, **E.N. Caspi**, A. Breskin. Fast-neutron and gamma-ray imaging with a capillary liquid xenon converter coupled to a gaseous photomultiplier, J. Inst. 12 (2017) P09029.

[5] D.J. Tallman, L. He, J. Gan, **E.N. Caspi**, E.N. Hoffman, M.W. Barsoum. Effects of neutron irradiation of Ti_3SiC_2 and Ti_3AlC_2 in the 121–1085 C temperature range, Journal of Nuclear Materials 484 (2017) 120-134.

[6] J. Halim, P. Chartier, T. Basyuk, T. Prikhna, **E.N. Caspi**, M.W. Barsoum, T. Cabioc'h. Structure and thermal expansion of $(Cr_x,V_{1-x})_{n+1}AlC_n$ phases measured by X-ray diffraction, J. Eur. Ceram. Soc. 37 (2017) 15-21.

[7] D. Vartsky, I. Israelashvili, M. Cortesi, L. Arazi, A.E. Coimbra, L. Moleri, E. Erdal, D. Bar, M. Rappaport, S. Shchemelinin, **E.N. Caspi**, O. Aviv, A. Breskin. Liquid-Xe detector for contraband detection, Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 824 (2016) 240-242.

[8] E. Tiferet, O. Rivin, M. Ganor, H. Ettedgui, O. Ozeri, **E.N. Caspi**, O. Yeheskel. Structural investigation of selective laser melting and electron beam melting of Ti-6Al-4V using neutron diffraction, Additive Manufacturing 10 (2016) 43-46.

[9] T. Lapauw, D. Tytko, K. Vanmeensel, S. Huang, P.P. Choi, D. Raabe, **E.N. Caspi**, O. Ozeri, M. To Baben, J.M. Schneider, K. Lambrinou, J. Vleugels. $(Nb_x,Zr_{1-x})_4AlC_3$ MAX Phase Solid Solutions: Processing, Mechanical Properties, and Density Functional Theory Calculations, Inorg Chem 55 (2016) 5445-5452.

[10] T. Lapauw, K. Lambrinou, T. Cabioc'h, J. Halim, J. Lu, A. Pesach, O. Rivin, O. Ozeri, **E.N. Caspi**, L. Hultman, P. Eklund, J. Rosén, M.W. Barsoum, J. Vleugels. Synthesis of the new MAX phase Zr_2AlC, J. Eur. Ceram. Soc. 36 (2016) 1847-1853.

[11] G.W. Bentzel, M. Naguib, N.J. Lane, S.C. Vogel, V. Presser, S. Dubois, J. Lu, L. Hultman, M.W. Barsoum, **E.N. Caspi**. High-Temperature Neutron Diffraction, Raman Spectroscopy, and First-Principles Calculations of Ti_3SnC_2 and Ti_2SnC, J. Am. Ceram. Soc. 99 (2016) 2233-2242.

[12] D.J. Tallman, E.N. Hoffman, **E.N. Caspi**, B.L. Garcia-Diaz, G. Kohse, R.L. Sindelar, M.W. Barsoum. Effect of neutron irradiation on select MAX phases, Acta Materialia 85 (2015) 132-143.

[13] M. Shamma, **E.N. Caspi**, B. Anasori, B. Clausen, D.W. Brown, S.C. Vogel, V. Presser, S. Amini, O. Yeheskel, M.W. Barsoum. In situ neutron diffraction evidence for fully reversible dislocation motion in highly textured polycrystalline Ti_2AlC samples, Acta Materialia 98 (2015) 51-63.

[14] O. Rivin, H. Shaked, A. Gukasov, **E.N. Caspi**. Polarized neutron powder diffraction by anisotropic ferromagnetic structures, Journal of Neutron Research 18 (2015) 13-20.

[15] O. Rivin, H. Shaked, **E.N. Caspi**. Induced magnetic ordering transition in RCo_5 type materials, Journal of Magnetism and Magnetic Materials 390 (2015) 152-159.

[16] C.C. Lai, R. Meshkian, M. Dahlqvist, J. Lu, L.Å. Näslund, O. Rivin, **E.N. Caspi**, O. Ozeri, L. Hultman, P. Eklund, M.W. Barsoum, J. Rosen. Structural and chemical determination of the new nanolaminated carbide Mo_2Ga_2C from first principles and materials analysis, Acta Materialia 99 (2015) 157-164.

[17] I. Israelashvili, M. Cortesi, D. Vartsky, L. Arazi, D. Bar, **E.N. Caspi**, A. Breskin. A comprehensive simulation study of a Liquid-Xe detector for contraband detection, Journal of Instrumentation 10 (2015) P03030-P03030.

[18] **E.N. Caspi**, P. Chartier, F. Porcher, F. Damay, T. Cabioc'h. Ordering of (Cr,V) Layers in Nanolamellar $(Cr_{0.5}V_{0.5})_{n+1}AlC_n$ Compounds, Materials Research Letters 3 (2015) 100-106.

[19] G.W. Bentzel, N.J. Lane, S.C. Vogel, K. An, M.W. Barsoum, **E.N. Caspi**. A High-Temperature Neutron Diffraction Study of Nb_2AlC and TiNbAlC, J. Am. Ceram. Soc. 98 (2015) 940-947.

[20] B. Anasori, M. Dahlqvist, J. Halim, E.J. Moon, J. Lu, B.C. Hosler, **E.N. Caspi**, S.J. May, L. Hultman, P. Eklund, J. Rosén, M.W. Barsoum. Experimental and theoretical characterization of ordered MAX phases Mo_2TiAlC_2 and $Mo_2Ti_2AlC_3$, Journal of Applied Physics 118 (2015) 094304.

[21] S. Shalev, **E.N. Caspi**, S. Shilstein, A.M. Paradowska, W. Kockelmann, T.C. Meron, Y. Levy. Middle Bronze Age II Battleaxes from Rishon LeZion, Israel: Archaeology and Metallurgy, Archaeometry 56 (2014) 279-295.

[22] O. Rivin, H. Shaked, A. Gukasov, **E.N. Caspi**. Long-range and short-range magnetic order in the singlet ground state system $TbCo_3B_2$, Physical Review B 89 (2014) 174423.

[23] M. Naguib, G.W. Bentzel, J. Shah, J. Halim, **E.N. Caspi**, J. Lu, L. Hultman, M.W. Barsoum. New Solid Solution MAX Phases: $(Ti_{0.5},V_{0.5})_3AlC_2$, $(Nb_{0.5},V_{0.5})_2AlC$, $(Nb_{0.5},V_{0.5})_4AlC_3$ and $(Nb_{0.8},Zr_{0.2})_2AlC$, Materials Research Letters 2 (2014) 233-240.

[24] N.J. Lane, S.C. Vogel, **E.N. Caspi**, S. Dubois, V. Gauthier-Brunet, G.P. Bei, M.W. Barsoum. A High-Temperature Neutron Diffraction and First-Principles Study of $Ti_3AlC_2$and $Ti3(Al_{0.8}Sn_{0.2})C_2$, J. Am. Ceram. Soc. 97 (2014) 570-576.

[25] M. Emuna, M. Mayo, Y. Greenberg, **E.N. Caspi**, B. Beuneu, E. Yahel, G. Makov. Liquid structure and temperature invariance of sound velocity in supercooled Bi melt, J Chem Phys 140 (2014) 094502.

[26] B. Anasori, **E.N. Caspi**, M.W. Barsoum. Fabrication and mechanical properties of pressureless melt infiltrated magnesium alloy composites reinforced with TiC and Ti_2AlC particles, Materials Science and Engineering: A 618 (2014) 511-522.

[27] O. Rivin, **E.N. Caspi**, H. Ettedgui, H. Shaked, A. Gukasov. Magnetic structure determination of $TbCo_2Ni_3$ using polarized and nonpolarized neutron powder diffraction, Physical Review B 88 (2013) 054430.

[28] M. Mayo, E. Yahel, Y. Greenberg, **E.N. Caspi**, B. Beuneu, G. Makov. Determination of the structure of liquids: an asymptotic approach, J. Appl. Crystallogr. 46 (2013) 1582-1591.

[29] N.J. Lane, S.C. Vogel, **E.N. Caspi**, M.W. Barsoum. High-temperature neutron diffraction and first-principles study of temperature-dependent crystal structures and atomic vibrations in Ti_3AlC_2, Ti_2AlC, and $Ti_5Al_2C_3$, Journal of Applied Physics 113 (2013) 183519.

[30] A. Beck, I. Israelashvili, U. Wengrowicz, **E.N. Caspi**, I. Yaar, A. Osovizki, A. Ocherashvili, H. Rennhofer, B. Pedersen, J.-M. Crochemore. Time dependent measurements of induced fission for SNM interrogation, Journal of Instrumentation 8 (2013) P08011.

[31] B. Anasori, **E.N. Caspi**, Y. Elraheb, M.W. Barsoum. On the oxidation of Ti_2GeC in air, Journal of Alloys and Compounds 580 (2013) 550-557.

[32] A. Ocherashvili, E. Roesgen, A. Beck, **E.N. Caspi**, M. Mosconi, J.M. Crochemore, B. Pedersen. SNM detection by means of thermal neutron interrogation and a liquid scintillation detector, Journal of Instrumentation 7 (2012) C03037-C03037.

[33] **E.N. Caspi**, Y. Greenberg, E. Yahel, B. Beuneu, G. Makov. What is the structure of liquid Bismuth?, Journal of Physics: Conference Series 340 (2012) 012079.

Publications prior to approval of last grade

[34] E. Zolotoyabko, **E.N. Caspi**, J.S. Fieramosca, R.B. Von Dreele, F. Marin, G. Mor, L. Addadi, S. Weiner, Y. Politi. Differences between Bond Lengths in Biogenic and Geological Calcite, Crystal Growth & Design 10 (2010) 1207-1214.

[35] E.J. Wolfson, **E.N. Caspi**, H. Ettedgui, H. Shaked, M. Avdeev. The effect of non-magnetic dilution of the Tb sublattice in $TbCo_3B_2$, Journal of Physics-Condensed Matter 22 (2010).

[36] Y. Greenberg, E. Yahel, **E.N. Caspi**, B. Beuneu, M.P. Dariel, G. Makov. On the relation between the microscopic structure and the sound velocity anomaly in elemental melts of groups IV, V, and VI, J. Chem. Phys. 133 (2010).

[37] **E.N. Caspi**, S. Shalev, S. Shilstein, A.M. Paradowska, W. Kockelmann, Y. Levy. Neutron diffraction study of Levantine Middle Bronze Age cast axes, Journal of Physics: Conference Series 251 (2010) 012047.

[38] E. Zolotoyabko, **E.N. Caspi**, J.S. Fieramosca, R.B. Von Dreele. Bond lengths differences between the mollusk-made and geological calcium carbonate, Mater. Sci. Eng. A-Struct. Mater. Prop. Microstruct. Process. 524 (2009) 77-81.

[39] Y. Greenberg, E. Yahel, **E.N. Caspi**, C. Benmore, B. Beuneu, M.P. Dariel, G. Makov. Evidence for a temperature-driven structural transformation in liquid bismuth, Epl 86 (2009).

[40] **E.N. Caspi**, H. Ettedgui, O. Rivin, M. Peilstocker, B. Breitman, I. Hershko, S. Shilstein, S. Shalev. Preliminary neutron diffraction study of two fenestrated axes from the 'Enot Shuni' Bronze Age cemetery (Israel), Journal of Archaeological Science 36 (2009) 2835-2840.

[41] E.J. Wolfson, **E.N. Caspi**, H. Ettedgui, H. Shaked, M. Avdeev. Magnetic and crystallographic study of $Tb_{0.75}Y_{0.25}Co_3B_2$, Journal of Magnetism and Magnetic Materials 320 (2008) L97-L101.

[42] O. Rivin, R. Osborn, A.I. Kolesnikov, **E.N. Caspi**, H. Shaked. Tb^{3+} in $TbCo_3B_2$: A singlet ground state system studied by inelastic neutron scattering, Physical Review B 78 (2008).

[43] B. Pokroy, J.S. Fieramosca, R.B. Von Dreele, A.N. Fitch, **E.N. Caspi**, E. Zolotoyabko. Atomic structure of biogenic aragonite, Chemistry of Materials 19 (2007) 3244-3251.

[44] I. Halevy, A. Beck, I. Yaar, S. Kahane, O. Levy, E. Auster, H. Ettedgui, **E.N. Caspi**, O. Rivin, Z. Berant, J. Hu. XRD, TDPAC and LAPW study of $Hf^{10}B_2$ under high pressure, Hyperfine Interactions 177 (2007) 57-64.

[45] M. Avdeev, **E.N. Caspi**, S. Yakovlev. On the polyhedral volume ratios V A/V B in perovskites ABX_3, Acta crystallographica. Section B, Structural science 63 (2007) 363-372.

[46] Y. Yedvab, I. Reiss, M. Bettan, R. Harari, A. Grober, H. Ettedgui, **E.N. Caspi**. Determination of delayed neutrons source in the frequency domain based on in-pile oscillation measurements, Proceedings of PHYSOR-2006, Canadian Nuclear Society, Vancouver, Canada (2006) 10-14.

[47] B. Pokroy, A.N. Fitch, P.L. Lee, J.P. Quintana, **E.N. Caspi**, E. Zolotoyabko. Anisotropic lattice distortions in the mollusk-made aragonite: A widespread phenomenon, Journal of Structural Biology 153 (2006) 145-150.

[48] Q.S. Lin, M. Greenblatt, **E.N. Caspi**, M. Avdeev. Crystallographic and magnetic properties of $CaLaMnMoO_6$ double perovskite, Journal of Solid State Chemistry 179 (2006) 2086-2092.

[49] I. Halevy, V.Y. Zenou, S. Salhov, **E.N. Caspi**, W. Schaefer, I. Yaar. High pressure study of the intermetallic compound UFe_2Al_{10}, Journal of Alloys and Compounds 419 (2006) 21-24.

[50] **E.N. Caspi**, A. Dubman, H. Ettedgui, H. Shaked, M. Melamud, L. Keller, A. Avdeev. Magnetic and crystallographic properties of $TbCo_4B$, Physica B-Condensed Matter 385 (2006) 339-342.

[51] O. Sigalov, A.I. Shames, **E.N. Caspi**, M. Dubman, H. Ettedgui, S.D. Goren, H. Shaked. Magnetic phase transition in YCo_3B_2 studied by magnetic resonance, Journal of Applied Physics 98 (2005).

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