

ATOMIC ENERGY COMMISSION

NUCLEAR RESEARCH CENTRE NEGEV
POB 9001 BEER SHEVA ISRAEL

קריה למחקר גרעיני נגב
ת.ד. 9001 באר-שבע מיקוד 84190

Beer - Sheva

July 11, 2019

Dr. Sven C. Vogel
Los Alamos NM
U.S.A.

Dear Dr. Vogel

On behalf of the Professional Staff Promotion Committee at NRCN, I would greatly appreciate receiving your advice and assistance in the following matter. **Dr. El'ad N. Kaspi** is currently under consideration for promotion to "A+" Research Grade at NRCN. The candidate's Curriculum Vitae and list of publications are enclosed.

Evaluations from scholars outside our institution are an essential component of a candidate's dossier. We would therefore welcome your detailed opinion on the quality of **Dr. El'ad N. Kaspi** research, its depth, originality and the degree to which it represents a contribution to the field.

It may help if, in making your evaluation, you would take into account the structure of ranks at NRCN: C, B, A and A+, that are roughly equivalent to Lecturer, Senior Lecturer, Associate Professor and Full Professor at Israeli universities. We would also like to emphasize that some of the research and development work at NRCN is proprietary. We would therefore appreciate if you could base your evaluation on the quality of the candidate's work and not on its overall quantity.

If you happen to know the candidate personally, we would be grateful for your opinion on his character, cooperation with colleagues and administrative abilities.

We realize that providing the evaluation would entail investment of your precious time and effort, but hope that we can impose on you for assistance in this matter. We would appreciate receiving your response by Aug. 12, 2019, if possible. Your letter will become part of **Dr. El'ad N. Kaspi** file and will be held in the strictest confidence.

Yours Sincerely,



Dr. Ohad Levy

Chair, Professional Staff Promotion Committee

August 2018

CURRICULUM VITAE



Dr. El'ad N. Caspi
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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 borides: 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 Ti₂AlC”*, 13th International Ceramics Congress, Montecatini Terme, Italy.
- 2013 *“Neutron diffraction evidence of IKB formation in textured Ti₂AlC 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)MnO₃: a complementary x-ray synchrotron and TOF neutron diffraction study”*, Frontiers in powder diffraction, 2003 NSLS users’ meeting, Brookhaven National Laboratory, NY, USA.

REFEREE OF SCIENTIFIC PUBLICATIONS AND PROPOSALS

Book review *Micromagnetism and the Microstructure of Ferromagnetic Solids*, H. Kronmüller and M. Fähnle, 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 3rd 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, Technion, 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. Sarel 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*

שם משתמש: אדרי מזל
מספר אישי: 102996

בקשה



הודעת מערכת:

מס' בקשה: 6828 יוזם: כספי אלעד תאריך יצירה: 17/01/18 סטטוס: הושלם

פרטי בקשה פרטי מתברים סבב אישורים

כותרת: קורות חיים לעזי

מתכונת מבוקשת: קורות חיים

סיווג מבוקש: בלמ"ס הערות יוזם: לצורך תיק דרגה ולשבתון

תפוצה מוצעת: כללית

הערות והשגות יוזם לגבי סיווג הבקשה:

האם הינך מאשר פרסום המסמך באנטרנט:

לפרסום זה ערך מסחרי:

שימוש בציוד/תוכנות בהתאם לתקן שנקבע:

הערות:

[CV EN Caspi January 2018.docx](#) +א-מחקר א-0

קובץ לפרסום: