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21/10



Qualifications

PhD, Technion-Israel Institute of Technology
1 Oct 1984 → 30 Sep 1988

Master, Ben-Gurion University of the Negev
1 Oct 1982 → 30 Sep 1984

Bachelor, Ben-Gurion University of the Negev
1 Oct 1978 → 30 Sep 1982

Employment

Full Professor

Full Professor
Department of Materials Engineering
Ben-Gurion University of the Negev
1 Oct 2010 → present

Vice-president Magnesium Research

Dead Sea Magnesium Ltd.
Israel
1 Feb 1994 → 31 Dec 2003

Associate Professor

University of KwaZulu-Natal
South Africa
1 Aug 1988 → 31 Jul 1995

Research outputs

Stress Corrosion Analysis and Direct Cell Viability of Biodegradable Zn-Fe-Ca Alloy in In-Vitro Conditions

Avior, O., Ghedalia-Peled, N. B., Ron, T., Goldman, J., Vago, R. & Aghion, E., 1 Jan 2022, In: *Metals*. 12, 1, 76.

The effect of a slow strain rate on the stress corrosion resistance of austenitic stainless steel produced by the wire laser additive manufacturing process

Bassis, M., Kotliar, A., Koltiar, R., Ron, T., Leon, A., Shirizly, A. & Aghion, E., 1 Dec 2021, In: *Metals*. 11, 12, 1930.

In vitro behavior of bioactive hybrid implant composed of additively manufactured titanium alloy lattice infiltrated with Mg-based alloy

Perets, T., Ben Ghedalia-Peled, N., Vago, R., Goldman, J., Shirizly, A. & Aghion, E., 1 Oct 2021, In: *Materials Science and Engineering C*. 129, 112418.

Evaluating the prospects of Ti-base lattice infiltrated with biodegradable Zn-2%Fe alloy as a structural material for osseointegrated implants-in vitro study

Gabay, N., Ron, T., Vago, R., Shirizly, A. & Aghion, E., 2 Aug 2021, In: *Materials*. 14, 16, 4682.

Effect of phase transformation on stress corrosion behavior of additively manufactured austenitic stainless steel produced by directed energy deposition

Ron, T., Dolev, O., Leon, A., Shirizly, A. & Aghion, E., 1 Jan 2021, In: *Materials*. 14, 1, p. 1-12 12 p., 55.

The effect of ca on in vitro behavior of biodegradable zn-fe alloy in simulated physiological environments

Avior, O., Ghedalia-Peled, N. B., Ron, T., Vago, R. & Aghion, E., 1 Dec 2020, In: *Metals*. 10, 12, p. 1-14 14 p., 1624.

Stress corrosion and corrosion fatigue of biodegradable mg-zn-nd-y-zr alloy in in-vitro conditions

Elkaïam, L., Hakimi, O. & Aghion, E., 1 Jun 2020, In: *Metals*. 10, 6, p. 1-13 13 p., 791.

The Effect of Hot Isostatic Pressure on the Corrosion Performance of Ti-6Al-4V Produced by an Electron-Beam Melting Additive Manufacturing Process

Leon, A., Levy, G. K., Ron, T., Shirizly, A. & Aghion, E., 1 May 2020, In: *Additive Manufacturing*. 33, 1 p., 101039.

In Vivo Evaluation of Mg-5%Zn-2%Nd Alloy as an Innovative Biodegradable Implant Material

Elkaïam, L., Hakimi, O., Yosafovich-Doitch, G., Ovadia, S. & Aghion, E., 1 Jan 2020, In: *Annals of Biomedical Engineering*. 48, 1, p. 380-392 13 p.

The effect of microstructural imperfections on corrosion fatigue of additively manufactured ER70S-6 alloy produced by wire arc deposition

Ron, T., Levy, G. K., Dolev, O., Leon, A., Shirizly, A. & Aghion, E., 1 Jan 2020, In: *Metals*. 10, 1, 98.

The effect of strain rate on stress corrosion performance of Ti6Al4V alloy produced by additive manufacturing process

Leon, A., Levy, G. K., Ron, T., Shirizly, A. & Aghion, E., 1 Jan 2020, In: *Journal of Materials Research and Technology*. 9, 3, p. 4097-4105 9 p.

Correction to: In Vivo Evaluation of Mg-5%Zn-2%Nd Alloy as an Innovative Biodegradable Implant Material (*Annals of Biomedical Engineering*, (2019), 10.1007/s10439-019-02355-5)

Elkaïam, L., Hakimi, O., Yosafovich-Doitch, G., Ovadia, S. & Aghion, E., 1 Dec 2019, In: *Annals of Biomedical Engineering*. 47, 12, p. 2515 1 p.

Corrosion performance of ER70S-6 steel produced by Additive Manufacturing process using wire-feed metal arc welding

Aghion, E., 31 Aug 2019, *21st International conference on Materials, Methods & Technologies*.

Environmental behavior of Ti-6Al-4V alloy obtained by additive manufacturing technology

Aghion, E., 31 Aug 2019, *3D Printing Annual Congress and Expo: Las Vegas, Nevada, USA*.

The effect of stress relieving on the corrosion resistance of aluminum alloy obtained by 3D printing technology (SLM)

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Environmental behavior of low carbon steel produced by a wire arc additive manufacturing process

Ron, T., Levy, G. K., Dolev, O., Leon, A., Shirizly, A. & Aghion, E., 1 Aug 2019, In: *Metals*. 9, 8, 888.

Microstructural assessment and mechanical properties of electron beam welding of AISi10Mg specimens fabricated by selective laser melting

Nahmany, M., Hadad, Y., Aghion, E., Stern, A. & Frage, N., 1 Aug 2019, In: *Journal of Materials Processing Technology*. 270, p. 228-240 13 p.

Surface stabilization treatment enhances initial cell viability and adhesion for biodegradable zinc alloys

Katarivas Levy, G., Kafri, A., Ventura, Y., Leon, A., Vago, R., Goldman, J. & Aghion, E., 1 Aug 2019, In: *Materials Letters*. 248, p. 130-133 4 p.

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The Effects of 4% Fe on the Performance of Pure Zinc as Biodegradable Implant Material

Kafri, A., Ovadia, S., Yosafovich-Doitch, G. & Aghion, E., 1 Jan 2019, In: Annals of Biomedical Engineering. 47, p. 1400–1408

Biodegradable metals

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In vivo performances of pure Zn and Zn–Fe alloy as biodegradable implants

Kafri, A., Ovadia, S., Yosafovich-Doitch, G. & Aghion, E., 1 Jul 2018, In: Journal of Materials Science: Materials in Medicine. 29, 7, 94.

The effect of Nd on mechanical properties and corrosion performance of biodegradable Mg-5% Zn alloy

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The suitability of Zn-1.3% Fe alloy as a biodegradable implant material

Kafri, A., Ovadia, S., Goldman, J., Drelich, J. & Aghion, E., 1 Mar 2018, In: Metals. 8, 3, 153.

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Structural Properties of EB-Welded AISi 10Mg Thin-Walled Pressure Vessels Produced by AM-SLM Technology

Nahmany, M., Stern, A., Aghion, E. & Frage, N., 1 Oct 2017, In: Journal of Materials Engineering and Performance. 26, 10, p. 4813-4821 9 p.

The Prospects of Zinc as a Structural Material for Biodegradable Implants: A Review Paper

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Effect of surface roughness on corrosion fatigue performance of AISi10Mg alloy produced by Selective Laser Melting (SLM)

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Porous biodegradable EW62 medical implants resist tumor cell growth

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Dunne, C. F., Levy, G. K., Hakimi, O., Aghion, E., Twomey, B. & Stanton, K. T., 15 Mar 2016, In: Surface and Coatings Technology. 289, p. 37-44 8 p.

Development of New Zinc Base Alloys for Biodegradable Implants

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Improving the corrosion resistance of biodegradable magnesium alloys by diffusion coating process

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Diffusion Coating Treatment as a Method to Prolong the Life Span of Biodegradable Magnesium Implants

Katarivas Levy, G. & Aghion, E., 22 Apr 2014, *Magnesium-21/BROAD HORIZONSAt: : St. Petersburg, Russia* .

Corrosion performance of biodegradable Mg-6%Nd-2%Y-0.5%Zr produced by melt spinning technology

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Effects of porosity on corrosion resistance of Mg alloy foam produced by powder metallurgy technology

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Effect of diffusion coating of Nd on the corrosion resistance of biodegradable Mg implants in simulated physiological electrolyte

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In vivo behavior of biodegradable Mg-Nd-Y-Zr-Ca alloy

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The prospects of carrying and releasing drugs via biodegradable magnesium foam
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The effect of Ca on the in vitro corrosion performance of biodegradable Mg-Nd-Y-Zr alloy
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Mechanical properties of die-cast magnesium alloy MRI 230d
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The effect of skin characteristics on the environmental behavior of die cast AZ91 magnesium alloy
Aghion, E. & Lulu, N., 1 Aug 2009, In: Journal of Materials Science. 44, 16, p. 4279-4285 7 p.

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The capability of MRI magnesium alloys to address high temperature applications requirements
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Corrosion behavior

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The role of the magnesium industry in protecting the environment

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