

رزومه

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اندیس های ارجاعات گوگل:

ارجاعات: 12619
اندیس اچ: ۶۲
اندیس ای-۱۰: 249

لینک به گوگل اسکالر

<https://scholar.google.com/citations?user=duBf4r0AAAAJ&hl=en>

زمینه‌های پژوهشی:

خواص مکانیکی و روش‌های شکل‌دهی مواد
با توجه ویژه به: خواص مکانیکی و رفتار تغییر شکل مواد ریزدانه؛ تغییر شکل پلاستیک شدید (SPD)؛ رفتار سوپر پلاستیک؛ ضریب حساسیت به نرخ کرنش؛ خزش آلیاژها و کامپوزیت‌ها؛ آزمون سنبه برشی مواد؛ شکل‌پذیری ورق‌های فلزی؛ دیاگرام‌های حد شکل‌دهی؛ ناپایداری پلاستیکی و انرژی پارگی ورق‌های فلزی.

سوابق تحصیلی دانشگاهی:

- دکترای علم و مهندسی مواد (۱۳۶۶)
دانشگاه بیرمنگهام، انگلستان.
موضوع پژوهش: "ساختار و شکل‌پذیری ورق‌های Al-Fe-Mn"
- کارشناسی ارشد مهندسی مکانیک (۱۳۵۸)
دانشگاه ویسکانسین-مدیسن، آمریکا.
- کارشناسی مهندسی متالورژی (۱۳۵۵)
دانشگاه صنعتی شریف، تهران، ایران.

فعالیت‌های آموزشی:

- استاد مدعو
دانشکده مهندسی مواد

دانشگاه بریتیش کلمبیا (UBC)، ونکوور، کانادا (۱۳۸۴-۱۳۸۵)

- استاد

دانشکده مهندسی متالورژی و مواد

دانشگاه تهران، تهران، ایران (از سال ۱۳۷۹ تاکنون)

- دانشیار

دانشکده مهندسی متالورژی و مواد

دانشگاه تهران، تهران، ایران (۱۳۷۴-۱۳۷۹)

- استادیار

دانشکده مهندسی متالورژی و مواد

دانشگاه تهران، تهران، ایران (۱۳۶۸-۱۳۷۴)

- مربی

دانشکده مهندسی متالورژی

دانشگاه صنعتی اصفهان، اصفهان، ایران (۱۳۶۲-۱۳۵۸)

پروژه‌های پژوهشی در دست اجرا:

- ۱- تغییر شکل پلاستیکی شدید (ECAP، SSE و MDF) آلیاژهای منیزیم.
- ۲- خواص مکانیکی آلیاژهای منیزیم تقویت شده با ذرات با اندازه نانو و میکرون.
- ۳- خزش فروروندگی مواد مهندسی.
- ۴- آنالیز شکل پذیری ورقهای منیزیمی آلیاژی.

راهنمایی رساله‌های پایان یافته :

- دکتری: ۱۴
- کارشناسی ارشد: 96
- کارشناسی: ۵۰

راهنمایی رساله‌های در دست اجرا:

- دکتری: ۱
- کارشناسی ارشد: ۷
- کارشناسی: 0

سوابق تدریس:

مقطع کارشناسی:

- خواص مکانیکی مواد
- شکل دهی فلزات

- انتخاب مواد فلزی
- خواص مکانیکی مواد (در دانشگاه UBC، کانادا)
- روش‌های تولید
- تکنولوژی جوشکاری
- متالورژی پودر

مقطع کارشناسی ارشد:

- شکل‌دهی فلزات پیشرفته
- شکل‌پذیری و کارپذیری فلزات
- انتخاب مواد مهندسی
- شکل‌دهی ورق‌های فلزی

مسئولیت‌های اجرایی:

- ۱- عضو فرهنگستان علوم جمهوری اسلامی ایران (از سال ۱۳۸۷ تاکنون).
- ۲- عضو هیئت تحریریه مجله بین‌المللی "Materials Science and Engineering A" انتشارات Elsevier (از سال ۱۳۸۹ تاکنون).
- ۳- عضو هیئت تحریریه مجله بین‌المللی "Journal of Magnesium and Alloys" انتشارات Elsevier (از سال ۱۳۹۸ تاکنون).
- ۴- عضو هیئت تحریریه مجله بین‌المللی "Iranian Journal of Science and Technology, Transactions of Mechanical Engineering"، انتشارات Springer (از سال ۱۳۹۱ تا ۱۳۹۷).
- ۵- عضو هیئت تحریریه مجله بین‌المللی "Current Nanomaterials"، انتشارات Bentham Science (از سال ۱۳۹۴ تاکنون).
- ۶- عضو هیئت تحریریه مجله بین‌المللی "Journal of Innovations in Materials and Manufacturing Engineering" انتشارات Scilight (از سال ۱۴۰۴ تاکنون).
- ۷- عضو هیئت تحریریه مجله "Iranian Journal of Materials Science and Engineering"، ایران (از سال ۱۳۸۲ تاکنون).
- ۸- عضو هیئت تحریریه مجله "Iranian Journal of Materials Forming"، ایران (از سال ۱۳۹۳ تاکنون).
- ۹- عضو هیئت تحریریه مجله "مهندسی متالورژی" (از سال ۱۳۷۹ تاکنون).
- ۱۰- عضو هیئت تحریریه مجله "شکل‌دهی مواد" (از سال ۱۳۹۲ تاکنون).
- ۱۱- عضو هیئت تحریریه مجله "دانشکده فنی" (۱۳۸۸-۱۳۸۰).
- ۱۲- عضو کمیته مهندسی صندوق ملی حمایت از پژوهشگران و فناوران ایران (۱۳۸۵-۱۳۸۹).
- ۱۳- عضو کمیسیون فنی هیئت ممیزه دانشگاه تهران (۱۳۸۱-۱۳۸۵).
- ۱۴- عضو هیئت مدیره انجمن مهندسی متالورژی ایران (۱۳۸۰-۱۳۷۴).
- ۱۵- رئیس دانشکده متالورژی و مهندسی مواد دانشگاه تهران (۱۳۷۲-۱۳۷۰).

۱۶- معاون پژوهشی دانشکده متالورژی و مهندسی مواد، دانشگاه تهران (۱۳۷۷-۱۳۸۲) (۱۳۷۴-۱۳۷۲) (۱۳۷۰-۱۳۶۸).

افتخارات:

- ۱- کسب جایزه علامه طباطبایی بنیاد نخبگان ریاست جمهوری (۱۴۰۴).
- ۲- کسب جایگاه ۲ در صد برتر دانشمندان جهان (۱۴۰۳).
- ۳- کسب جایگاه ۲ در صد برتر دانشمندان جهان (۱۴۰۲).
- ۴- کسب جایگاه ۲ در صد برتر دانشمندان جهان (۱۴۰۱).
- ۵- کسب جایگاه ۲ در صد برتر دانشمندان جهان (۱۴۰۰).
- ۶- کسب جایگاه ۲ در صد برتر دانشمندان جهان (۱۳۹۹).
- ۷- کسب عنوان پژوهشگر برتر کشور (۱۳۹۷).
- ۸- کسب جایگاه ۱ در صد برتر دانشمندان و نخبگان علمی جهان (۱۳۹۴).
- ۹- نویسنده بین‌المللی برجسته دانشگاه تهران (۱۳۹۲).
- ۱۰- مدرس برجسته دانشگاه تهران (۱۳۹۲).
- ۱۱- پژوهشگر برجسته دانشگاه تهران (۱۳۹۱).
- ۱۲- کسب جایزه برترین پروژه پژوهشی دانشگاه تهران (۱۳۸۱).
- ۱۳- استاد نمونه دانشگاه تهران (۱۳۸۱).
- ۱۴- پژوهشگر برگزیده دانشگاه تهران (۱۳۷۹).
- ۱۵- پژوهشگر نمونه دانشگاه تهران (۱۳۷۷).
- ۱۶- کسب جایزه برترین پژوهش کاربردی دانشگاه تهران (۱۳۷۷).
- ۱۷- استاد نمونه دانشکده فنی (۱۳۷۳).

طرح‌های پژوهشی خارج از بودجه‌های دانشگاهی:

- ۱- "آلیاژهای فوق مستحکم منیزیمی Mg-Gd-Y-Zr"، صندوق ملی حمایت از پژوهشگران و فناوران، تهران، ایران.
- ۲- "توسعه، فرآوری و شناسایی آلیاژهای ریزدانه فوق سبک منیزیم-لیتیم"، صندوق ملی حمایت از پژوهشگران و فناوران، تهران، ایران.
- ۳- "توسعه و بررسی آلیاژهای منیزیم مقاوم به خزش"، صندوق ملی حمایت از پژوهشگران و فناوران، تهران، ایران.
- ۴- "رفتار خزشی آلیاژهای لحیم فاقد سرب برای کاربردهای میکروالکترونیک"، صندوق ملی حمایت از پژوهشگران و فناوران، تهران، ایران.
- ۵- "تدوین تکنولوژی تولید کابل اتصال شیاردار"، شرکت ملی راه‌آهن، تهران، ایران.
- ۶- "طرح ملی تدوین تکنولوژی تولید لنت ترمز بدون آزبست از کامپوزیت‌های زمینه فلزی".
- ۷- "بهینه‌سازی فرآیند تولید پرچ‌های استحکام بالای آلومینیومی"، شرکت پرچ ساز، تهران، ایران.
- ۸- "فرآوری آلیاژ ریخته‌گری - نورد شده آلومینیوم AA3004 برای قوطی نوشابه"، شرکت آلومینیوم پارس،

ساوه، ایران.

- ۹- " خواص مکانیکی و رفتار شکل‌دهی آلیاژهای آلومینیوم سری ۸xxx، شرکت آلومینیوم پارس، ساوه، ایران.
- ۱۰- " بررسی آلیاژ Cu-0/1% Fe مورد استفاده در فین رادیاتور"، شرکت شهید باهنر، کرمان، ایران.
- ۱۱- "تأثیر عناصر آهن و سولفور بر خواص مکانیکی و شکل‌پذیری ورق‌های مس و برنجی"، شرکت شهید باهنر، کرمان، ایران.
- ۱۲- "بررسی عیوب قطعات برنجی نورد شده"، شرکت شهید باهنر، کرمان، ایران.
- ۱۳- "تأثیر تغییر شکل پلاستیک بر زبری سطحی ورقهای مس و برنجی"، شرکت شهید باهنر، کرمان، ایران.
- ۱۴- "بهینه‌سازی خواص مکانیکی فولاد AISI4130 عملیات شده به روش کوئنچ گازی"، وزارت صنایع سنگین، تهران، ایران.

طرح‌های پژوهشی دانشگاهی:

- ۱- " رفتار خزشی آلیاژ منیزیم AZ61 " (۱۳۹۰).
- ۲- " ساختار و شکل‌پذیری ورقهای Mg-Sn " (۱۳۹۰).
- ۳- "ناهمگنی کرنشی در سیم‌های کشش سرد شده" (۱۳۸۳).
- ۴- "تأثیر عنصر Zr بر رفتار پیرسختی آلیاژهای ریخته شده Al-Si" (۱۳۸۲).
- ۵- "خزش فرورونده مواد مهندسی" (۱۳۸۱).
- ۶- "تعیین نسبت کرنش پلاستیکی در ورقهای فلزی" (۱۳۸۱).
- ۷- "تأثیر همگن‌سازی بر شکل‌پذیری ورق‌های آلومینیوم" (۱۳۷۹).
- ۸- "خزش آلیاژهای لحیم فاقد سرب" (۱۳۷۹).
- ۹- " رفتار تغییرشکل آلیاژهای Pb-Sn-Sb " (۱۳۷۹).
- ۱۰- "انرژی پارگی ورقهای فلزی حین تغییرشکل کششی تک محوره" (۱۳۷۸).
- ۱۱- "تأثیر عملیات حرارتی زیر صفر بر روی خواص سایشی فولاد M2" (۱۳۷۷).
- ۱۲- "رفتار سایشی یاتاقان‌های خود روانکار" (۱۳۷۵).
- ۱۳- "ناپایداری پلاستیکی حین تغییر شکل کششی ورق آلومینیومی" (۱۳۷۴).
- ۱۴- "کنترل عیب گوشواره‌ای شدن در کشش عمیق ورق آلومینیومی از جنس AA3003" (۱۳۷۵).

تجربیات صنعتی:

مشاور علمی - مشاوره در زمینه انتخاب مواد و انجام آزمون بر روی مواد مورد استفاده در سیستم‌های مکانیکی، آزمایشگاه مواد، وزارت بازرگانی ایران، ایران (۱۳۸۳-۱۳۷۴).

مشاور تحقیقاتی - انجام آنالیز و آزمون‌ها بر روی ورق‌های آلومینیوم تولید شده به روش ریخته‌گری نواری استفاده شده در کاربردهای ورق و زوروق، شرکت آلومینیوم پارس، ایران (۱۳۸۱-۱۳۷۱).

رئیس بخش تحقیق و توسعه - مدیریت بخشهای مختلف تحقیقاتی برای تولید ورق‌های آلومینیومی سری ۸xxx، شرکت آلومینیوم پارس، ایران (۱۳۶۹-۱۳۶۷).

مقالات علمی چاپ شده در نشریات بین‌المللی (ISI):

- 1- M. Sabbaghian, N. Fakhar, J. Mola, R. Mahmudi, J.J. Sidor, K. Mukhtarova, and J. Gubicza, “**Serrated shear flow in AA5083 alloy refined by dual equal channel lateral extrusion process**”, *Metals and Materials International*, In press.
- 2- Z. Savaedi, H. Mirzadeh, R. Mehdinavaz Aghdam, and R. Mahmudi, “**Enhancing stress corrosion cracking resistance of biodegradable Mg–Zn–Zr alloy by rare-earth element addition**”, *Materials Science and Technology*, In press.
- 3- P. Mahmoud Kalayeh, M. Malekan, H. Mirzadeh, M. Roostaei, I. Weißensteiner, A. Bahmani, M. Emamy, and R. Mahmudi, “**Improved mechanical properties of Mg–Ni–Y alloys via thermomechanical processing**”, *Metals and Materials International*, In press.
- 4- A. Eftetahi and R. Mahmudi, “**Enhancing stretch formability of an AZ31 magnesium alloy sheet via differential heating of the punch and die**”, *Journal of Materials Research and Technology*, **42** (2025) 591–597.
- 5- M.J. Sohrabi, S. Sadeghpour, M.S. Mehranpour, A. Kalhor, M. Zolfipour Aghdam, F. Hasanabadi, H. Mirzadeh, K. Rodak, R. Mahmudi, H.S. Kim, “**Coupling metastability engineering and martensite strengthening in Si-alloyed AISI 304L stainless steel toward enhanced strength-ductility synergy**”, *Materials and Design*, **263** (2026) 115623.
- 6- A. Kalhor, M.J. Sohrabi, S. Sadeghpour, M. Mobasheri, H. Mirzadeh, K. Rodak, and R. Mahmudi, “**Evaluation of the work-hardening behavior of austenitic stainless steels by miniature testing techniques**”, *Journal of Materials Engineering and Performance*, **35** (2026) 5091–5099.
- 7- M.S. Mehranpour, M.J. Sohrabi, A. Kalhor, A. Heydarinia, S. Sadeghpour, H. Mirzadeh, K. Rodak, K. Radwański, R. Mahmudi, and H.S. Kim, “**Extraordinary strength-ductility synergy in a novel high-entropy alloy via coupling multiple strengthening mechanisms**”, *Intermetallics*, **189** (2026) 109094.
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- 10- A. Rezaei, R. Mahmudi, and R. Loge, “**Dynamic recrystallization and strengthening mechanisms in a magnesium alloy processed by severe plastic deformation**”, *Journal of Magnesium and Alloys*, **13** (2025) 5600–5623.

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- 23- A. Aallami, A.R. Geranmayeh, and R. Mahmudi, “**Impression creep of a cast Ag-doped AZ91 magnesium alloy**”, *Materials Science and Engineering A*, **921** (2025) 147599.
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