

Curriculum Vitae

Ihsan Çaha

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Scholar Profiles:

ORCID: <https://orcid.org/0000-0002-8212-874X>

Google Scholar: <https://scholar.google.com/citations?user=5FDLlzQAAAAJ&hl=en&oi=ao>

Researcher ID: <https://publons.com/researcher/AAA-4681-2021/>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=57021947400>

ResearchGate: <https://www.researchgate.net/profile/Ihsan-Caha>

Ciência ID: <https://www.cienciavitae.pt/en/F311-EBE9-7E2F>

ACADEMIC DEGREES

- | | |
|-----|---|
| PhD | PhD in Biomedical Science, <i>University of Minho</i> , Biomedical Engineering, Braga, Portugal (June 2021)

Thesis title: Bio-functionalization of tribocorrosion resistant β type Ti-based hybrid surfaces, Supervisors: A. M. Pinto and Fatih Toptan |
| MSc | MSc in Physics, <i>Ege University</i> , Physics Department, Izmir, Turkey (September 2013)

Thesis title: The characterization of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ superconducting structures that are prepared at different heat treatments, Supervisor: Mustafa Tepe |
| BSc | <i>Ege University</i> , Physics Department, Izmir, Turkey (June 2010) |

RESEARCH AND ACADEMIC EMPLOYMENT

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| 09/2021 – | <u>Postdoctoral Research Fellow</u>

Project: Correlated Analysis of Inorganic Solar Cells in and outside an Electron Microscope (FCT Funded - CASOLEM) |
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INL - International Iberian Nanotechnology Laboratory Braga,
Portugal

01/2017 – 06/2021

Early Stage Researcher (PhD Student)

Project: Bio-functionalization of tribocorrosion resistant β type Ti-based hybrid surfaces (M-ERA-NET/0001/2015)

01/2015 – 01/2016

Research Assistant

Project: Custom designed optical tweezer for trapping yeast cells (TUBITAK)

07/2013 – 07/2016

Research Assistant

Project: Fabrication and characterization of sonochemically grown metal oxide nanorods based on flexible perovskite solar cells (TUBITAK)

EXPERIENCE AS SCIENTIFIC ADVISER

1. Responsible for **PhD student Vinícius R. Manso Gonçalves** from Physics Department of UNESP, Brazil, on the research theme of “In-situ synthesis of functionally graded Ti-based matrix composites by low-cost liquid metallurgical route”, 01/09/2019-31/08/2020, University of Minho, Portugal.

2. Responsible for **PhD student Burak Kuçukelyas** from Bursa Technical University, Metallurgical and Materials Engineering Department, Bursa, Turkey, on the research theme “Corrosion and tribocorrosion behavior of High entropy CoCrFeNiMn alloy in seawater”, 01/12/2019-4/05/2020, University of Minho, Portugal.

3. Responsible for the **MSc student Hasan Köklü** from Yildiz Technical University, Metallurgical and Materials Engineering Department, Istanbul, Turkey, on the research theme of “Investigation of Dry Sliding, Corrosion and Tribocorrosion Properties for Cu Alloys and Co-Cr-Mo Alloys Subjected to High Pressure Torsion”, 07/09/2017-30/06/2018, University of Minho, Portugal.

4. Responsible for **MSc student Letícia Oliveira Rocha** from Materials Science and Engineering Department of Universidade Federal de São Paulo – Campus São José dos Campus

(UNIFESP), Brazil, on the research theme of “Tribocorrosion behavior of nitride 7075 - T651 aluminum alloy”, 01/09/2017-0

5. Rui Monteiro and Hélder Teixeira, ‘Integrated Lab 6 Project’ under the **Integrated Master program**, University of Minho, Portugal, Surface Modification of Ti-Al₂O₃ Bio-Composites, Supervisor: Fatih Toptan. Concluded: 17 January 2019.

6. Anabel Campos and Cátia Marinho, ‘Integrated Lab 6 Project’ under the **Integrated Master Program**, University of Minho, Portugal, Nano-tubular structures growth on beta-type Ti alloys for biomedical applications, Supervisor: Ana Maria Pinto. Concluded: 18 December 2018.

7. Diana Carvalho and Vera Macedo, ‘Integrated Lab 6 Project’ under the **Integrated Master Program**, University of Minho, Portugal, Bio-functionalization by micro-arc oxidation of beta-type Ti alloys, Supervisor: Ana Maria Pinto. Concluded: 21 December 2018.

8. Responsible for the **internship of Bünyamin Kiroğlu** from Bursa Technical University, Metallurgical and Materials Engineering Department, Bursa, Turkey, on the theme of “Corrosion and tribocorrosion behaviour of Al-Cu matrix graphene reinforced composites”, June-July 2018, University of Minho, Portugal.

9. Responsible for the **internship of İrem Sapmaz** from Bursa Technical University, Metallurgical and Materials Engineering Department, Bursa, Turkey, on the theme of “Corrosion and tribocorrosion behaviour of Al-Cu matrix graphene reinforced composites”, June-July 2018, University of Minho, Portugal. 1/12/2017, University of Minho, Portugal.

PUBLICATIONS

Papers in international peer-reviewed journals:

- 1. I. Çaha**, A.C. Alves, C. Chirico, A. Pinto, S. Tsipas, E. Gordo, F. Toptan, Improved tribocorrosion behavior on bio-functionalized β -type titanium alloy by the pillar effect given by TiN reinforcements, **Surf. Coat. Technol.** 415 (2021) 127122. doi:10.1016/j.surfcoat.2021.127122.
- 2. I. Çaha**, A.C. Alves, L.J. Affonço, J.H.D. Silva, I.R. Rodrigues, C.R. Grandini, A. Rocha, A.M.P. Pinto, P.N. Lisboa-filho, F. Toptan, Degradation behaviour of Ti-12Nb alloy coated with ZnO/TiN double layer, **Surf. Coat. Technol.** 413 (2021) 127104. doi:10.1016/j.surfcoat.2021.127104.

3. **I. Çaha**, A.C. Alves, C. Chirico, A.M.P. Pinto, S. Tsipas, E. Gordo, F. Toptan, A promising method to develop TiO₂-based nanotubular surfaces on Ti-40Nb alloy with enhanced adhesion and improved tribocorrosion resistance, **Appl. Surf. Sci.** (2020) 148658. doi:<https://doi.org/10.1016/j.apsusc.2020.148658>.
4. **I. Çaha**, A.C. Alves, L.A. Rocha, F. Toptan, A Review on Bio-functionalization of β -Ti Alloys, **J. Bio- Tribo-Corrosion**. 6 (2020) 1–31. doi:10.1007/s40735-020-00432-0.
5. **I. Çaha**, A.C. Alves, C. Chirico, S.A. Tsipas, I.R. Rodrigues, A.M.P. Pinto, C.R. Grandini, L.A. Rocha, E. Gordo, F. Toptan, Interactions between wear and corrosion on cast and sintered Ti-12Nb alloy in comparison with the commercial Ti-6Al-4V alloy, **Corros. Sci.** 176 (2020) 108925. doi:10.1016/j.corsci.2020.108925.
6. **I. Çaha**, A.C. Alves, P.A.B. Kuroda, C.R. Grandini, A.M.P. Pinto, L.A. Rocha, F. Toptan, Degradation behavior of Ti-Nb alloys: Corrosion behavior through 21 days of immersion and tribocorrosion behavior against alumina, **Corros. Sci.** 167 (2020) 108488. doi:10.1016/j.corsci.2020.108488.
7. **I. Çaha**, A. Alves, C. Chirico, A. Pinto, S. Tsipas, E. Gordo, F. Toptan, Corrosion and Tribocorrosion Behavior of Ti-40Nb and Ti-25Nb-5Fe Alloys Processed by Powder Metallurgy, **Metall. Mater. Trans. A Phys. Metall. Mater. Sci.** 51 (2020) 3256–3267. doi:10.1007/s11661-020-05757-6.
8. **I. Çaha**, A.C. Alves, L.J. Affonço, P.N. Lisboa-Filho, J.H.D. da Silva, L.A. Rocha, A.M.P. Pinto, F. Toptan, Corrosion and tribocorrosion behaviour of titanium nitride thin films grown on titanium under different deposition times, **Surf. Coatings Technol.** 374 (2019) 878–888. doi:10.1016/j.surfcoat.2019.06.073.
9. **I. Çaha**, A. Alves, C. Chirico, A. Pinto, S. Tsipas, E. Gordo, F. Toptan, Preliminary investigation on the corrosion and tribocorrosion behavior of the first insight of TiO₂-based nanotubular formation on TiN reinforced β type Ti-40Nb alloy, **Under review in Appl. Surf. Sci.**

Papers in International Conference Proceedings:

1. Y. Bayam, D. Rodrigues, R. Atalay, C. Zafer, S. Okur, R.K. Bala, T.O. Okyay, B. Gültekin, I. Caha, E.E. Tural, S. Duyar, C. Özbek, T. Guler, Sonochemically grown 1D ZnO nanostructures and their applications, in: Proc. SPIE - Int. Soc. Opt. Eng., 2015. doi:10.1117/12.2190286.

Oral Presentations in International Conferences:

1. **I. Çaha**, A.C. Alves, C. Chirico, A.M.P. Pinto, S.A. Tsipas, E. Gordo, and F. Toptan, Corrosion and tribocorrosion behavior of anodic treated Ti-Nb and Ti-Nb-Fe alloys for biomedical implant applications, **Eurocorr2019**.
2. **I. Çaha**, A.C. Alves, L.J. Affonço, P.N. Lisboa-Filho, J.H.D. da Silva, L.A. Rocha, A.M.P. Pinto, and F. Toptan. Corrosion and tribocorrosion behavior of TiN coating film on Ti-Nb alloys for biomedical implant applications, **Eurocorr2019**.
3. **I. Çaha**, C. Chirico A.C. Alves, L.J. Affonço, P.N. Lisboa-Filho, J.H.D. da Silva, L.A. Rocha, A.M.P. Pinto, S.A. Tsipas, E. Gordo and F. Toptan, Corrosion and tribocorrosion behavior of Ti-Nb based alloys, **DCE2019**.
4. **I. Çaha**, A.C. Alves, C. Chirico, A.M.P. Pinto, S.A. Tsipas, E. Gordo, and F. Toptan, Morphological variations on the nanotubular layers grown on Ti-Nb alloys, **Materials2019**.
5. **I. Çaha**, A.C. Alves, L.J. Affonço, P.N. Lisboa-Filho, J.H.D. da Silva, L.A. Rocha, A.M.P. Pinto, and F. Toptan. Corrosion and tribocorrosion behaviour of titanium nitride thin films grown on titanium under different deposition times, **7th IBTN day**, 2018.

Books:

1. **I. Çaha**, Geometric Optic, ISBN:978-605-64853-5-0, Sertan Press, 2014.

TEACHING EXPERIENCE

2013 – 2016 Lecturer, Opticianry Program, Gediz University, Turkey

The Courses Given at Gediz University:

1. *Geometrik optic I-II*
2. *General Physics I-II*
3. *General Chemistry I-II*

LANGUAGE SKILLS

Turkish (Native), English (Fluent), Portuguese (Intermediate).

REFERENCES

- **Prof. Ana Maria Pires Pinto – PhD Supervisor**
Department of Mechanical Engineering, University of Minho, Guimarães, Portugal
Email: anapinto@dem.uminho.pt
- **Assist. Prof. Fatih Toptan – PhD Co-Supervisor**
Department of Materials Science and Engineering, Izmir Institute of Technology, Izmir, Turkey

Email: fatihoptan@iyte.edu.tr

- **Prof. Paulo Noronha Lisboa-Filho – PhD Advisor**

Department of Materials Chemistry and Physics, São Paulo State University, Bauru, BRAZIL

Email: paulo.lisboa@unesp.br

- **Prof. Luis Rocha – PhD Advisor**

DTx - Digital Transformation CoLab, Guimarães, Portugal

Email: luis.rocha@dtx-colab.pt

- **Prof. Elena Gordo – PhD Advisor**

Department of Materials Science and Engineering, University Carlos III of Madrid, Leganés, Spain

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