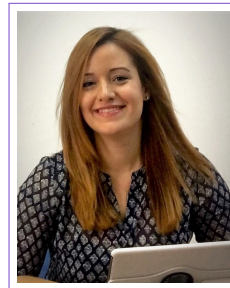


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Education

- 2010–present **Ph.D.**, McGill University, Mining and Materials Engineering Department, Montréal, Canada.
Research Topic: Fabrication of Dye-Sensitized Solar Cells on Anodized Aluminum Alloy-Based Electrode Substrates
Supervisors: Mathieu Brochu & George P. Demopoulos
- 2007–2009 **M.Sc.**, Istanbul Technical University, Materials Engineering Department, Istanbul, Turkey.
Research Topic: The Effect of Various Pre-Treatment Processes on Aluminium Anodization
Supervisor: Mustafa Ürgen
- 2004–2007 **B.Sc.**, Marmara University, Industrial Engineering, Double Major, Istanbul, Turkey.
- 2002–2006 **B.Sc.**, Marmara University, Metallurgical and Materials Engineering, Istanbul, Turkey.
Research Topic: Application of Extrusion and Co-Extrusion Processes
Supervisor: İ. Ersan Kalafatoğlu
- 1995–2002 **High School**, The Koc School, Istanbul, Turkey.

Experience

- 2008–present **Research Assistant**, Marmara University, Istanbul, Turkey.
Faculty of Engineering, Metallurgical and Materials Engineering Department, Extractive Metallurgy
- 2006–2007 **Senior Project**, Monoplast A.Ş., Istanbul, Turkey.
Application of Extrusion and Coextrusion Processes for Polymeric Hoses
- July–Aug. **Intern**, Arçelik A.Ş. Washing Machine Plant, Istanbul, Turkey.
2005 Assembly Team and Production Planning Departments
- June–Aug. **Intern**, Turkish Airlines, Istanbul, Turkey.
2004 Non-Destructive Testing (NDT) Department

Awards & Scholarships

- Awards
- AluQuébec Award, Poster presentation, REGAL-JER 2014 Conference, Sherbrooke, Canada, Oct. 18th, 2014
 - Best Presentation Award, 22nd Annual International Anodizing Conference and Exposition, Seattle, USA, 2013
 - ALCOA Award, Poster presentation, REGAL-JER 2012 Conference, Trois-Rivières, Canada, Nov. 15th, 2012
- Scholarships
- Rio Tinto Alcan, Canada, 2010
 - Higher Education Council of Turkey, 2010-2014

Publications and Presentations

- Paper **N. Alpay**, N. P. Benekohal, G. P. Demopoulos, M. Brochu, “Utilization of Al-Si Alloy Counter Electrode Substrates for Next Generation Solar Cell Applications”, Applied Surface Science, Volume 356, 30 November 2015, 317–324, doi:10.1016/j.apsusc.2015.08.058.
- Paper M.-P. Côté, N. P. Benekohal, **N. Alpay**, G. P. Demopoulos, M. Brochu, “Development of Titanium-Sputtered Anodized Aluminum Substrates for Dye-Sensitized Solar Cells”, Metallurgical and Materials Transactions E, December 2014, Volume 1, Issue 4, pp 311-317, doi: 10.1007/s40553-014-0032-7.
- Poster **N. Alpay**, G. Demopoulos, M. Brochu, “Utilization of Anodized Aluminum Alloy Electrodes for Next Generation Solar Cell Applications”, REGAL-JER 2014, Sherbrooke, Canada, October 18th, 2014.
AluQuébec Award.

- Oral M. Brochu, **N. Alpay**, M.-P. Côté, G. P. Demopoulos, Coupling Solar Energy Conversion Devices to Anodized Aluminum Alloys, 22nd Annual International Anodizing Conference and Exposition, Seattle, USA, October 3rd, 2013. *Best Presentation Award*.
- Oral **N. Alpay**, G. Demopoulos, M. Brochu, “Dye-Sensitized Solar Cells with Anodized Aluminum Alloy-based Counter-electrodes”, Material Science & Technology 2013 Conference & Exhibition, Montréal, Canada, October 27-31, 2013.
- Oral **N. Alpay**, G. Demopoulos, M. Brochu, “Enabling the Use of Anodized Aluminum for Dye-Sensitized Solar Cell Fabrication”, Next Generation Solar 2013, Photovoltaics Canada, Hamilton, Canada, May 8-10, 2013.
- Oral **N. Alpay**, G. Demopoulos, M. Brochu, “Anodization of Aluminum-Titanium Alloys for Solar Cell Applications”, Material Science & Technology 2011 Conference & Exhibition, Columbus, USA, October 16-20, 2011.
- Poster **N. Alpay**, G. Demopoulos, M. Brochu, “Surface Engineering of Aluminum Electrodes for Dye-Sensitized Solar Cells”, REGAL-JER 2013, Montréal, Canada, October 22th, 2013.
- Poster **N. Alpay**, M. Brochu, G. Demopoulos, “Fabrication and Characterization of Aluminum Alloy-based Electrodes for Dye-sensitized Solar Cell Applications”, 2012 MRS Fall Meeting & Exhibit, Boston, USA, November 25-30, 2012.
- Poster **N. Alpay**, G. Demopoulos, M. Brochu, “Development of Aluminum Alloy-Based Electrodes for Dye-Sensitized Solar Cell Applications”, REGAL-JER 2012, Trois-Rivières, Canada, November 15th, 2012. *ALCOA Award*.

Training

Training **First Canadian Photovoltaics Graduate School**, Ottawa, Ontario, Canada, May 16-18, 2012.

Membership and Activity

Membership Marmara University, International Center of Sustainability (ICS)

Activity Organizing Committee Member, First International Sustainability Congress by ICS, İstanbul, Turkey, Dec. 1-3, 2016.

Skills

Computing MATLAB, L^AT_EX, MS Office

Equipment SEM, Particle Sizer, XPS, XRD, TG-DSC/DTA, Solar Simulator, Impedance Spectrometer, Metallography using Optical Microscopy

Teaching Numerical Methods, Transport Phenomena, Introduction to Computing, Ceramic Processing Techniques, Degradation of Materials, Total Quality Management

Research Dye-Sensitized Solar Cells, Anodization, Sustainability, Renewable Energy, Aluminum Alloys, Quality Management Systems, Characterization of Materials

Language Turkish (native), English (fluent), French (pre-intermediate)

Hobby Yoga, Volleyball, Rollerblading, Ice Skating