

ALLEGATO B

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. 1 posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera b) della Legge 240/2010 per il settore concorsuale 03/C2, settore scientifico-disciplinare CHIM/04 - Chimica Industriale, presso il Dipartimento di CHIMICA, (avviso bando pubblicato sulla G.U. n. 35 del 04/05/2021) Codice concorso 4611

Hasan Samet Varol **CURRICULUM VITAE**

(N.B. IL CURRICULUM NON DEVE ECCEDERE LE 30 PAGINE E DEVE CONTENERE TUTTI GLI ELEMENTI UTILI ALLA VALUTAZIONE DEI TITOLI SOTTOPOSTI AL GIUDIZIO DELLA COMMISSIONE)

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	VAROL
NOME	HASAN SAMET
DATA DI NASCITA	14 Febbraio 1987

TITOLI

TITOLO DI STUDIO

(indicare la Laurea conseguita inserendo titolo, Ateneo, data di conseguimento, ecc.)

Bachelor of Science in Metallurgical and Materials Engineering (Department of Engineering, Marmara University, Istanbul) 17 July 2009

Master of Science in Advanced Materials/Nanomaterials (Department of Materials Science, University of Ulm, Germany) 18 January 2012

TITOLO DI DOTTORE DI RICERCA O EQUIVALENTI, OVVERO, PER I SETTORI INTERESSATI, DEL DIPLOMA DI SPECIALIZZAZIONE MEDICA O EQUIVALENTE, CONSEGUITO IN ITALIA O ALL'ESTERO

(inserire titolo, ente, data di conseguimento, ecc.)

Doctor (PhD), Faculty of Science, University of Amsterdam (The Netherlands), 19 April 2017

ATTIVITÀ DIDATTICA A LIVELLO UNIVERSITARIO IN ITALIA O ALL'ESTERO

(inserire anno accademico, ateneo, corso laurea, ecc.)

ATTIVITÀ DIDATTICA

a.a. 2021/22: Technical University of Darmstadt (TU-Darmstadt), Germany, Department of Chemistry, Master degree in Chemistry, Course "Synthesis and Characterization of Polymers at Interfaces"

a.a. 2020/21 TU-Darmstadt, Germany, Department of Chemistry, Master degree in Chemistry, Course "Synthesis and Characterization of Polymers at Interfaces"

a.a. 2019/20 University of Zurich, Switzerland, Department of Chemistry, Bachelor Degree in Chemistry, Course "Statistical Thermodynamics"

a.a. 2018/19 University of Zurich, Switzerland, Department of Chemistry, Bachelor Degree in Chemistry, Course "Statistical Thermodynamics"

ATTIVITA' DI SUPERVISIONE STUDENTI

1 December 2020 - 30 January 2021; Technical University of Darmstadt, Germany, Department of Chemistry, internship of internal M.Sc. student (E. Feyzi)

1 March - 30 July 2019; University of Zurich, Switzerland, Department of Chemistry, guest PhD student from City University of Hong Kong (V. M.-W. Yim)

15 June - 29 September 2017; Max Planck Institute for Polymer Research (MPIP), Germany, Department of Molecular Spectroscopy, M.Sc. student (A. Srivastava) from Aix-Marseille University

1 January - 1 September 2015; Max Planck Institute for Polymer Research (MPIP), Germany, Department of Molecular Spectroscopy, M.Sc. student's (C. Malm) from Johannes Gutenberg-Universität Mainz.

DOCUMENTATA ATTIVITÀ DI FORMAZIONE O DI RICERCA PRESSO QUALIFICATI ISTITUTI ITALIANI O STRANIERI;

(inserire anno accademico, ente, corso, ecc.)

1 February 2020 - present

Postdoctoral fellow in TU-Darmstadt, Germany | Macromolecular Chemistry Department | Smart Membranes Research Group (Supervisor: Prof. Dr. Annette Andrieu-Brunsen)

1 February 2018 - 31 January 2020

Postdoctoral fellow in University of Zurich (UZH), Switzerland | Department of Chemistry | Silicone Nanofilaments, Imaging Group (Supervisor: Prof. Dr. Stefan Seeger)

1 March 2017 - 30 September 2017

Postdoc scholarship in Max Planck Institute for Polymer Research (MPIP), Germany | Department of Molecular Spectroscopy | Molecular Imaging Research Group (Supervisors: Prof. Dr. Mischa Bonn & Prof. Dr. Sapun Parekh)

1 December 2012 - 28 February 2017

PhD student in Max Planck Institute for Polymer Research (MPIP), Germany | Department of Molecular Spectroscopy | Molecular Imaging Research Group (Supervisors: Prof. Dr. Mischa Bonn & Prof. Dr. Sapun Parekh)

1 March 2012 - 1 August 2012

Research Scientist in Max Planck Institute for Polymer Research (MPIP), Germany | Department of Physical Chemistry (Supervisors: Prof. Dr. Katharina Landfester & Prof. Dr. Rafael Muñoz-Espí)

DOCUMENTATA ATTIVITÀ IN CAMPO CLINICO

(indicare, data, durata, ruolo, ente presso il quale si è prestata attività assistenziale, ecc.)

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REALIZZAZIONE DI ATTIVITÀ PROGETTUALE

(indicare, data, progetto, ecc.)

1 February 2020 - present

TU-Darmstadt, Germany | Macromolecular Chemistry Department | Smart Membranes Research Group

Research projects:

- (i) Functional mesoporous silica pores by responsive polymers and controlled perspective.
- (ii) Conductive and mesoporous indium tin oxide (ITO) membranes and their ionic transport.
- (iii) 3D printing of soft membranes with changing pore size and surface texture.

Outcome: One first-name and two co-author articles (in preparation).

1 February 2018 - 31 January 2020

University of Zurich (UZH), Switzerland | Department of Chemistry | Silicone Nanofilaments, Imaging Group

Research Projects:

- (i) Synthesizing different shape and functionality polysiloxane micro- & nanotextures on surfaces to make them super-anti wetting.
- (ii) Studying the fundamentals of liquid/solid interactions at (super) anti-wetting surfaces by using various electron and in-situ confocal microscopy methods.
- (iii) Growing different polysiloxane structures on the surface of flexible membranes (PVDF) to make them superhydrophobic and superamphiphobic.

Outcome: Two first-name and one co-author articles (in preparation).

1 March 2017 - 30 September 2017

Max Planck Institute for Polymer Research (MPIP), Germany | Department of Molecular Spectroscopy | Molecular Imaging Research Group

Research Project:

Explaining the fundamental strain softening and strain stiffening mechanism of nanocomposites under cyclic forces.

Outcome: One first-name article (published).

1 December 2012 - 28 February 2017

Max Planck Institute for Polymer Research (MPIP), Germany | Department of Molecular Spectroscopy | Molecular Imaging Research Group

Research Project:

- (i) Ph.D. project entitled “Mechanics of filled rubbers from a molecular point of view.” Explaining the molecular origin of changing linear and nonlinear viscoelastic properties of elastomer-based nanocomposites.
- (ii) Studying the defect of graphene layers by Raman Spectroscopy
- (iii) Explaining the aggregation behaviour of proteins by using ATR-IR spectroscopy.

Outcome: Two first-name and four co-author articles (published).

1 March 2012 - 1 August 2012

Research Scientist in Max Planck Institute for Polymer Research (MPIP), Germany | Department of Physical Chemistry

Research Project:

Synthesizing hybrid metallic nanomaterials via using different miniemulsion techniques.

Outcome: One first-name article (published).

ORGANIZZAZIONE, DIREZIONE E COORDINAMENTO DI GRUPPI DI RICERCA NAZIONALI E INTERNAZIONALI, O PARTECIPAZIONE AGLI STESSI

(per ciascuna voce inserire anno, ruolo, gruppo di ricerca, ecc.)

Project: “Understanding the visco-elasticity of elastomer-based nanocomposites” FOM - Dutch Research Council Funding - Industrial Partnership Programme

Participating research institutions: University of Amsterdam, AMOLF, Technische Universiteit Eindhoven, University of Glasgow, Max Planck Institute for Polymer Research, Mainz.

Participating Industrial Partners: Michelin Corporate Research, Dutch Polymer Institute, SKF corporate research,

My role in the project: PhD student working on “Spectroscopic investigation of the rubber/filler interaction”

TITOLARITÀ DI BREVETTI

(per ciascun brevetto, inserire autori, titolo, tipologia, numero brevetto, ecc.)

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ATTIVITÀ DI RELATORE A CONGRESSI E CONVEGNI NAZIONALI E INTERNAZIONALI

(inserire titolo congresso/convegno, data, ecc.)

23 - 28 June 2019

Oral presentation

ICMAT-2019 | 10th International Conference on Materials for Advanced Technologies (MRS-S) | Marina Bay Sands, Singapore

24 October 2017

Invited speaker

Invited speaker in the group seminar talk in the “Applied Physical Chemistry” group in Heidelberg University | Heidelberg, Germany

6 September 2017

Invited speaker

Cargill Composite Webinar | Cargill, Cargill R&D Centre Europe BV, Belgium

22 - 26 March 2015

Oral presentation

249th America Chemical Society - ACS National Meeting | Denver, USA

19 - 22 May 2014

Oral presentation

NANOSMAT-USA | Rice University, Houston, USA

22 - 24 September 2013

“Visions in Science - Shaping the Future” The Max Planck Society Meeting, MPI-CBG, Dresden, Germany

CONSEGUIMENTO DI PREMI E RICONOSCIMENTI NAZIONALI E INTERNAZIONALI PER ATTIVITÀ DI RICERCA
(*inserire premio, data, ente organizzatore, ecc.*)

May 2014

Gold award (1st in ranking), in “Young Scientist Lecture Competition” in 2nd NANOSMAT-USA international conference in Rice University, Houston, USA

September 2013

Best poster award, in annual poster day of Max Planck Institute for Polymer Research, Mainz, Germany

POSSESSO DEL DIPLOMA DI SPECIALIZZAZIONE EUROPEA RICONOSCIUTO DA BOARD INTERNAZIONALI
(*relativamente a quei settori concorsuali nei quali è prevista*)
(*indicare diploma, data di conseguimento, ecc.*)

TITOLI DI CUI ALL'ARTICOLO 24 COMMA 3 LETTERA A) E B) DELLA LEGGE 30 DICEMBRE 2010, N. 240
(*indicare se contratto di tipologia A o B, Ateneo, data di decorrenza e fine contratto, ecc.*)

PRODUZIONE SCIENTIFICA

PUBBLICAZIONI SCIENTIFICHE

(per ciascuna pubblicazione indicare: nomi degli autori, titolo completo, casa editrice, data e luogo di pubblicazione, codice ISBN, ISSN, DOI o altro equivalente)

1. S. A. Jensen, Z. Mics, I. Ivanov, **H. Samet Varol**, D. Turchinovich, F. H. L. Koppens, M. Bonn, and K. J. Tielrooij, "*Competing Ultrafast Energy Relaxation Pathways in Photoexcited Graphene*", **Nano letters**, 14 (10): 5839-5845 (2014).
2. M.R.B. Mermet-Guyennet, J. G. de Castro, **H. Samet Varol**, M. Habibi, B. Hosseinkhani, N. Martzel, R. Sprik, M.M. Denn, A. Zacccone, S.H. Parekh and D. Bonn, "*Size-dependent reinforcement of composite rubbers*", **Polymer**, 73: 170-173 (2015)
3. J. G. de Castro, R. Zargar, M. Habibi, **H. Samet Varol**, S. H. Parekh, B. Hosseinkhani, M. Adda-Bedia and D. Bonn, "*Nonmonotonic fracture behavior of polymer nanocomposites*", **Appl. Phys. Lett.**, 106: 221904 (2015)
4. **H. Samet Varol**, M. Alejandra Sánchez, Hao Lu, Joe E. Baio, Christian Malm, Noemi Encinas, Marius R. B. Mermet-Guyennet, Nicolas Martzel, Daniel Bonn, Mischa Bonn, Tobias Weidner, Ellen H. G. Backus and Sapun H. Parekh, "*Multiscale Effects of Interfacial Polymer Confinement in Silica Nanocomposites*", **Macromolecules**, 48: 7929-7937 (2015)
5. **H. Samet Varol**, Olaia Álvarez-Bermúdez, Paolo Dolcet, Balati Kuerbanjiang, Silvia Gross, Katharina Landfester, and Rafael Muñoz-Espí, "*Crystallization at Nanodroplet Interfaces in Emulsion Systems: A Soft-Template Strategy for Preparing Porous and Hollow Nanoparticles*", **Langmuir**, 32:13116-13123 (2016)
6. **H. Samet Varol**, Fanlong Meng, Babak Hosseinkhani, Christian Malm, Daniel Bonn, Mischa Bonn, Alessio Zacccone, Sapun H. Parekh, "*Nanoparticle amount, and not size, determines chain alignment and nonlinear hardening in polymer nanocomposites*", **Proc. Natl. Acad. Sci. U. S. A.**, 114 (16): 3170-3177 (2017)
7. **H. Samet Varol**, "*Mechanics of filled rubbers from a molecular point of view*", **Diss. University of Amsterdam.**, ISBN 978-3-95638-850-7 (2017)
8. Davoud Mozhdehi, Kelli M. Luginbuhl, Joseph R. Simon, Michael Dzuricky, Rüdiger Berger, **H. Samet Varol**, Fred C. Huang, Kristen L. Buehne, Nicholas R. Mayne, Isaac Weitzhandler, Mischa Bonn, Sapun H. Parekh & Ashutosh Chilkoti, "*Genetically encoded lipid-polypeptide hybrid biomaterials that exhibit temperature-triggered hierarchical self-assembly*", **Nature Chemistry**, 10 (5): 496-505 (2018)
9. **H. Samet Varol**, Anchit Srivastava, Sachin Kumar, Mischa Bonn, Fanlong Meng, Sapun H. Parekh, "*Bridging chains mediate nonlinear mechanics of polymer nanocomposites under cyclic deformation*", **Polymer**, DOI: 10.1016/j.polymer.2020.122529 (2020)

Data

3 giugno 2021

Luogo

Mainz