

Stanislav PILETSKY

CONTACT INFORMATION

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EMPLOYMENT AND EDUCATION

PRESENT **Memorial Sloan Kettering Cancer Centre**, New York, USA.
APRIL 2023- Postdoctoral Research Scholar, Heller Group.

DECEMBER 2022- **Imperial College London**, London, UK.
OCTOBER 2018 PhD in Chemistry.

JUNE 2018- **Imperial College London**, London, UK.
OCTOBER 2014 Chemistry MSci - First Class, Hons.

SCHOLARSHIPS AND AFFILIATIONS

DECEMBER 2022- **President's PhD Scholarship**.
OCTOBER 2018 Imperial College London, Department of Chemistry.

DECEMBER 2022- **Medical Research Council Doctoral Training Partnership (MRC DTP) Studentship**.
OCTOBER 2018 Imperial College London, Faculty of Medicine.

DECEMBER 2022- **Aligned Student of the Medical Imaging EPSRC Centre for Doctoral Training**.
OCTOBER 2018 Imperial College London/King's College London.

AWARDS AND ACKNOWLEDGEMENT

PhD Prize 2023 Annual Department of Chemistry award recognising outstanding PhD performance.
Imperial College London.

FoNS Prizes for Excellence 2022 Prize for Excellence in Health and Safety. Given in recognition of excellence in promoting and implementing safe practices across the Faculty.
Imperial College London.

Proteintech AACR Research Grant 2021 Grant for the support of young scientists working within cancer research, available to PhD students, lab managers and postdoctoral researchers.
Proteintech Group.

Wilkinson Charitable Trust 2019 Grant for the support of research in inorganic chemistry, international work placements and presentation at international conferences.
Imperial College London.

Alfred Bader Prize 2017 Awarded to one final year MSci student for excellence in organic chemistry.
Imperial College London.

Presentation Prize 2017 Best undergraduate research presentation in total synthesis and bio-organic chemistry.
Imperial College London.

BP Dean's Award 2015 Awarded to the student in the top 10% of the year who has made the biggest contribution to university life outside of studies.
Imperial College London.

FoNS MAD 2015 Winning team, competition to develop low-cost technology that would have a positive impact on society (Faculty of Natural Sciences Make-A-Difference competition).
Imperial College London.

Dean's List 2014 - 2017 Member of the Faculty of Natural Sciences Dean's List.
Imperial College London.

RESEARCH EXPERIENCE

- PRESENT** **Postdoctoral Research Scholar, Heller Lab, MSKCC.**
APRIL 2023- Developing new classes of diagnostic sensors using single walled carbon nanotubes and molecularly imprinted polymers. Developing new approaches for nanotube defect formation, polymer grafting, and sensor design.
- DECEMBER 2022-** **PhD Student, Spivey Group and Aboagye Group, Imperial College.**
OCTOBER 2018 Developing molecularly imprinted polymers (MIPs) as a tool for cancer diagnostics and treatment, with a focus on epidermal growth factor receptor (EGFR) targeting. Developed MIP-based approach for epitope mapping of cancer cells (DOI: 10.1016/j.nantod.2021.101304), optimised the solid phase synthesis of MIPs (DOI: 10.3390/polym14081595) and analysed their biocompatibility (DOI: 10.3390/polym14214582).
- JUNE 2018-** **MSci Student, Cass Group, Imperial College.**
OCTOBER 2017 Designed a novel assay format using molecularly imprinted polymer nanoparticles for the detection of arbitrary biological and chemical molecules. Replaced biological binding agents and reporters used within ELISA to create a high-stability, low-cost assay suitable for quantitative, high-throughput screening (DOI: 10.1002/cnma.201800393).
- SUMMER** **Visiting Researcher, University of British Columbia.**
2017 Spent 8 weeks working with the Algar Group in UBC during an Imperial IROP. Assisted with the creation of a novel quantum dot FRET-based assay for multiplex enzyme detection suitable for *ex vivo* analysis. Received training in handling and passaging of cancer cell lines, performed micro-injections and monitored injected cells using fluorescence microscopy. Designed and generated a quantum dot complex FRET simulation. Presented my work at the 2017 NSERC NanoMat Symposium.
- SUMMER** **Team Leader, FoNS Make-A-Difference Competition Winning Team, Imperial College.**
2015 Received 8 weeks of college funded research lab space and reagent budget. Wrote and filed a patent for a novel, abiotic blood type testing method using paramagnetic molecularly imprinted nanoparticles. Lead author of the resulting RSC Chemical Communications cover article (DOI: 10.1039/C6CC08716G).
- PRESENT-** **Visiting Researcher, University of Leicester.**
2013 Performed a broad range of research involving molecular imprinting, developing novel assay formats based on magnetic microtiter plate inserts (DOI: 10.1021/ac203254p, DOI: 10.1080/22243682.2018.1473050) and Ostwald ripening of silica nanoparticles (DOI: 10.1038/s41598-017-12007-0).
- SPRING** **Work Experience Student, Cranfield University.**
2011 Assisted in development of novel microtiter plate-based assay involving magnetic inserts. Created and tested various formats. Gained experience with CAD, laser cutting and analytical equipment. Research culminated in paper (*ACS, Analytical Chemistry*, DOI: 10.1021/AC203254P) and patent (US20150119274 A1).

PUBLICATIONS

- 30/10/2023 Modulation of EGFR Activity by Molecularly Imprinted Polymer Nanoparticles Targeting Intracellular Epitopes, *ACS Nano Letters*. DOI: 10.1021/acs.nanolett.3c01374.
- 28/10/2022 Piletsky, S. S. et al. 'Assessing the *in vivo* biocompatibility of molecularly imprinted polymer nanoparticles', *Polymers*. DOI: 10.3390/polym14214582.
- 14/04/2022 Piletsky, S. S. et al. 'Iodo Silanes as Superior Substrates for the Solid Phase Synthesis of Molecularly Imprinted Polymer Nanoparticles', *Polymers*. DOI: 10.3390/polym14081595.
- 10/11/2021 Abbott, B. et al. 'Use of polymeric solid phase in synthesis of MIP nanoparticles for biotin', *Reactive and Functional Polymers*. DOI: 10.1016/j.reactfunctpolym.2021.105109.
- 18/09/2021 Piletsky, S. S. et al. 'Snapshot Imprinting: Rapid Identification of Cancer Cell Surface Proteins and Epitopes using Molecularly Imprinted Polymers', *Nano Today*. DOI: 10.1016/j.nantod.2021.101304.
- 01/04/2020 Piletsky, S. S. et al. 'Molecularly Imprinted Polymers for Cell Recognition', *Trends in Biotechnology*. DOI: 10.1016/j.tibtech.2019.10.002.
- 12/12/2019 Piletska, E. V. et al. 'Probing peptide sequences on their ability to generate affinity sites in molecularly imprinted polymers', *Langmuir*. DOI: 10.1021/acs.langmuir.9b03410.
- 19/11/2019 Piletska, E. V. et al. 'Combinatorial screening of polymer nanoparticles for their ability to recognize epitopes of AAV-neutralizing antibodies', *Journal of Molecular Recognition*. DOI: 10.1002/jmr.2824.
- 10/10/2018 Piletska, E. V. et al. 'Novel assay format for proteins based on magnetic molecularly imprinted polymer nanoparticles-detection of pepsin', *Journal of the Chinese Advanced Materials Society*. DOI: 10.1080/22243682.2018.1473050.
- 12/09/2018 Piletsky, S. S. et al. 'A Novel Assay Format as an Alternative to ELISA: MINA Test for Biotin', *ChemNanoMat*. DOI: 10.1002/cnma.201800393.
- 14/09/2017 Piletska, E. V. et al. 'Biomimetic Silica Nanoparticles Prepared by a Combination of Solid-Phase Imprinting and Ostwald Ripening', *Scientific Reports, Nature Publishing Group*. DOI: 10.1038/s41598-017-12007-0.
- 07/12/2016 Piletsky, S. S. et al. 'Development of molecularly imprinted polymers specific for blood antigens for application in antibody-free blood typing', *Chemical Communications*. DOI: 10.1039/C6CC08716G.
- 19/05/2014 Piletska, E. V. et al. 'Microplates with enhanced immobilization capabilities controlled by a magnetic field', *Journal of the Chinese Advanced Materials Society*. DOI: 10.1080/22243682.2014.914854.
- 21/02/2012 Piletska, E. V. et al. 'Development of a new microtiter plate format for clinically relevant assays.', *Analytical Chemistry*. DOI: 10.1021/ac203254p.