Crystal M. Han

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EDUCATION

Stanford University, Stanford, CA 2011 – 2015
Ph.D., Mechanical Engineering
Advisor: Juan Santiago
Thesis title: Improvement of speed and sensitivity of DNA hybridization using isotachophoresis
Stanford University

PEER-REVIEWED JOURNAL PUBLICATIONS (* Equal Contribution)

1. Khnouf R., **Han C.M.**, **"**Isotachophoresis-Enhanced Immunoassays, Challenges and Opportunities", IEEE Nanotechnology Magazine, 2020 (accepted)
2. Khnouf R., **Han C.M.,** Munro S.A., "Isolation of enriched small RNA from cell-lysate using on-chip isotachophoresis," 40 (23-24), 3140-3147, Electrophoresis, 2019
3. **Han C.M.,** Catoe D., Munro S.A., Khnouf R., Santiago J.G., Snyder M.P., Salit M.L., Cenik C., "Simultaneous RNA purification and size selection using an on-chip isotachophoresis with ionic spacer,"19, 2741–2749, Lab Chip, 2019
4. Khnouf R., Shore S., **Han C.M.,** Henderson J., Munro S., McCaffrey A., Shintaku H., Santiago J.G., "Single-Cell Sequencing for Small RNA Using Modified Adapters," 90, 12609-12615, Analytical Chemistry, 2018
5. Cao Y., Hjort M., Chen H., Birey F., Leal-Ortiz S., **Han C.M.,** Santiago J.G., Pasca S.P., Wu J., Melosh N.A., "Non-Destructive Nanostraw Intracellular Sampling for Longitudinal Cell Monitoring," 114 (10): E1866-E1874,

4. **Han, C.M.**, A. Munro, S.A., Shintaku, H., Zagarra, F.V., Santiago, J.G., Salit, M., "Rapid extraction of ribosome footprints from a single cell for genome-wide ribosome profiling," Stanford Genetics Retreat 2016, Monterey, CA, September 21-23, 2016
5. **Han, C.M.**, Bercovici, M., Bahga, S.S., Katilius, E., Santiago, and Santiago, J.G., "Rapid and sensitive DNA hybridization by isotachophoresis," NIST Sigma Xi Postdoc Poster Presentation, Gaithersburg, MD, February 19, 2016
6. **Han, C.M.**,* Bahga, S.S.,* Santiago, J.G., "Integration of rapid DNA hybridization and capillary zone electrophoresis," BioX Interdisciplinary Initiatives Symposium, Stanford, CA, February 25, 2013
7. **Han, C.M.,** Bercovici, M., Marshall, L.A., Garcia-Schwarz, G., Persat, A., Liao, J.C., and Santiago J.G., "Isotachophoresis for extraction and rapid hybridization of nucleic acids," the International Symposium, Exhibit & Workshop on Electro- and Liquid Phase-Separation Techniques, ITP 2012, Baltimore, MD, September 30 – October 3, 2012
8. **Han, C.M.**,* Bercovici M.,* Liao, J.C., and Santiago, J.G., "Nucleic acid hybridization speed-up using isotachophoresis," Biomechanical Engineering Conference at Stanford (BMECS), Stanford, CA, May 22, 2012
9. Bercovici M.,* **Han C.M.**,* Santiago J.G., and Liao J.C., "Rapid DNA hybridization using isotachophoreis", Gordon Research Conference on Physics and Chemistry of Microfluidics, Waterville Valley, NH, June 26 – July 1, 2011
10.

OTHER PRESENTATIONS

Tapas Talks - Engineering and Science, “Development of on-chip techniques for purification and size selection of RNA