



## Justin Roth

M.S.

### Materials Scientist

#### Department

Engineering Services

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#### Locations

Philadelphia, PA

## Biography

Justin Roth has over 10 years of professional experience as a petrologist/petrographer, stemming from his more than a decade-long relationship with the petrographic microscope. As a Materials Scientist, Justin characterizes concrete samples based on aggregate composition, cement paste quality, water/cement ratio, air void percentage, depth of carbonation, and evidence of alkali-silica reactions (ASR). Through these investigations, Justin provides insight into concrete's big-picture ideas: potential failure mechanisms, corrosion, weathering/leaching, fire damage, sulfate attack, and freeze/thaw durability.

Spending the first part of his career as a petrologist in the oil and gas industry, Justin achieved expertise in various methods of characterizing rock types based on composition, texture, organic content, porosity, and permeability.

## Credentials

- M.S.

## Professional Experience

- 2024 - Current | Materials Scientist | YA Group
- 2019 - 2024 | Project Petrographer/Geologist | GeoStructures, Inc.
- 2014 - 2019 | Digital Rock Geologist/Petrologist | Schlumberger

## Publications and Presentations

- 2013 - Roth, J., Davatzes, N.C., and Davatzes, A. E. K. (2013). "Investigating the Volume and Structure of Porosity in Fractured and Unfractured Rock From the Newberry Volcano, Oregon, USA: Evaluation of Two- and Three- Dimensional Methods." Geothermal Resources Council Annual Meeting., Vol.37, p. 209.

## Education

- Temple University - Master of Science - Geology - Philadelphia - Pennsylvania
- Millersville University - Bachelor of Science - Geology - Lancaster - Pennsylvania

## Affiliations

- Society of Concrete Petrographers Geological Society of America