

Novel Absorbance-Based Colorimetry from Droplets on Nonwetting Substrates

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- Materials and Manufacturing
- Mechanical Engineering

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- Biology
- Materials and Manufacturing
- Mechanical Engineering
- Molecular Biology
- Molecule Reactions
- Research Tools
- Substrate
- Surface Chemistry

Researchers at Purdue University have developed a novel sessile droplet method for highly efficient colorimetry on nonwetting substrates. Colorimetric reactions include mixing a coloring agent with a droplet of biologic sample quickly enough to cause a reaction while also producing a measure of sample concentration before these aqueous samples evaporate. The method created by Purdue University allows for diffusion two orders of magnitude higher than typical micro-titer plates. Natural buoyancy of droplets leads to induced convection, and can be coupled with surface heating for even faster mixing results – without dissipation. High throughput testing is now possible as the plates adapt instantly to droplet volume, and the fabrication of the overall colorimetry test setup is simplified.

Advantages:

- Adapts to volume of droplets
- Compatible with nonwetting surfaces
- Fast fabrication

Potential Applications:

- Laboratory Research
- Materials and Manufacturing

People:

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Intellectual Property:

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