Chemistry, B.S.
Forensic Chemistry, B.S.
Medical Laboratory Science, B.S.

Alumni Profile
Aleks Pisarenko, Ph.D.
Trussell Technologies

Aleksey Pisarenko has a B.S. in Chemistry from York College of PA and Ph.D. in Chemistry from Miami University. Dr. Pisarenko is a leader in water and wastewater treatment, conducting research on emerging water contaminants and development of mitigation strategies. He has co-authored 16 publications and given over 30 presentations. Dr. Pisarenko has conducted pilot-scale studies in advanced wastewater treatment, such as: membrane bioreactor (MBR); advanced oxidation, including O$_3$/H$_2$O$_2$, UV/H$_2$O$_2$; and membrane filtration systems, including microfiltration (MF), ultrafiltration (UF), and reverse osmosis (RO). While working at Southern Nevada Water Authority, Dr. Pisarenko investigated the effects of oxidation on the effluent organic matter (EfOM) to minimize organic fouling of RO membranes and evaluated the impacts of various technologies on trace organic and inorganic contaminant mitigation in water reuse applications. His current work involves investigating the chemistry of NDMA and perfluorochemical (PFC) formation in wastewater during ozonation.

Employment Record - Here is a partial list of companies who have hired our recent graduates:

- Accutest
- Adhesives Research
- Air Products
- AMZ Manufacturing
- Ankom Technology
- BAE Systems
- BASF Corporation
- Bimax Chemicals
- Bristol-Myers Squibb
- Champions Oncology
- Church & Dwight
- City of Hope
- COIM USA
- Envrite
- Geisinger Medical Center
- Gilead Sciences
- GlaxoSmithKline
- Harley-Davidson
- Hershey Medical Center
- Johns Hopkins Hospital
- Johnson and Johnson
- Eurofins Lancaster Labs
- McCormick Spice
- Middlebury College
- Morristown Hospital
- MPI Research
- MRG Laboratories
- NMS Labs
- NYC Police Department
- PA-DEP
- Particle Sciences
- Pfizer
- Polytex
- PPG
- Proctor and Gamble
- Quest Diagnostics
- Ross Technology
- Sciex
- Seldon Technologies
- Siemens Healthcare
- SiGNa Chemistry
- Starbucks
- Takeda Pharmaceutical
- Thermo Fisher
- Trussell Technologies
- UPM Pharmaceuticals
- US Army
- Villanova University
- Wellspan Health
- Wilbur Chocolate
- York College of PA
- York Laboratories

Graduate Programs - Here is a partial list of graduate schools who have accepted our recent graduates:

- Dickinson College
- Drexel University
- Fairleigh Dickinson University
- George Mason University
- George Washington U.
- Miami University
- Penn State University
- Syracuse University
- Temple University
- Texas A&M University
- University of Rochester
- University of the Sciences
- University of Utah
- University of Alabama
- University of Washington
- University of Buffalo
- University of Maryland
- University of Vermont
- Vanderbilt University
- Villanova University

For more information, please see our website at: http://www.ycp.edu/chemistry
York College of Pennsylvania
Chemistry Program

Our courses expose students to the most up-to-date, practical techniques which prepare them for advanced studies or employment. They spend significant hands-on time with instruments.

### Major instrumentation acquired by the chemistry program

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supercritical Fluid Extractor</td>
<td>$50K</td>
</tr>
<tr>
<td>UV/VIS Spectrophotometer</td>
<td>$20K</td>
</tr>
<tr>
<td>GC/MS/MS</td>
<td>$100K</td>
</tr>
<tr>
<td>FT-IR</td>
<td>$20K</td>
</tr>
<tr>
<td>FT-NMR</td>
<td>$200K</td>
</tr>
<tr>
<td>Fluorescence Spectroscopy</td>
<td>$30K</td>
</tr>
<tr>
<td>Ion Chromatograph</td>
<td>$35K</td>
</tr>
<tr>
<td>ICP-AES</td>
<td>$80K</td>
</tr>
<tr>
<td>Atomic Force Microscopy</td>
<td>$40K</td>
</tr>
<tr>
<td>Raman Spectroscopy</td>
<td>$60K</td>
</tr>
<tr>
<td>FTIR Microscopy</td>
<td>$70K</td>
</tr>
<tr>
<td>LC-MS</td>
<td>$60K</td>
</tr>
<tr>
<td>Chiral-IR</td>
<td>$120K</td>
</tr>
<tr>
<td>UV/VIS</td>
<td>$60K</td>
</tr>
<tr>
<td>Atomic Absorption</td>
<td>$75K</td>
</tr>
<tr>
<td>X-Ray Fluorescence</td>
<td>$100K</td>
</tr>
<tr>
<td>Capillary Zone Electrophoresis</td>
<td>$70K</td>
</tr>
<tr>
<td>TGA/DSC</td>
<td>$50K</td>
</tr>
<tr>
<td>Parr Calorimeter</td>
<td>$10K</td>
</tr>
<tr>
<td>Scanning Probe Microscopy</td>
<td>$50K</td>
</tr>
<tr>
<td>SFC</td>
<td>$80K</td>
</tr>
<tr>
<td>GC/MS</td>
<td>$40K</td>
</tr>
</tbody>
</table>

Our students are encouraged to participate in independent study as soon as they arrive on campus. Chemistry majors are required (Forensic Chemistry majors may choose) to partner with a faculty member their senior year and work on meaningful research. Most will publish their findings at the national meeting of the American Chemical Society.

### Titles of papers presented by YCP students at the March 2016 meeting of the American Chemical Society, San Diego, CA

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determination of illicit drug metabolites in wastewater by liquid chromatography mass spectroscopy</td>
</tr>
<tr>
<td>Heavy metal content analysis of wines produced in the U.S. using inductively coupled plasma-optical emission spectroscopy</td>
</tr>
<tr>
<td>Detection of methamphetamine in medium and low velocity bloodstain patterns</td>
</tr>
<tr>
<td>Comparative perspectives of France and the US in climate change negotiations</td>
</tr>
<tr>
<td>Predictive modeling of the UV-VIS spectra for a series of short-chained polyenes</td>
</tr>
<tr>
<td>Crosslinking of the antibody anti-human IL 13R alpha 2 peptide IgY to FITC via PDPH</td>
</tr>
<tr>
<td>Determination of the effect of dissolved oxygen on the rate of oxidation presented by trans-2-nonenal in beer</td>
</tr>
</tbody>
</table>

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