



Accelerate process modeling insights for Industrial Water Treatment with the new OLI Platform V10

| 28 <i>New Enhanced Capabilities</i> | 4 <i>Solution Areas</i> | 4 <i>Water Treatment Application Categories</i> |
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| <ul style="list-style-type: none"> • 6 new chemistries • 8 new software features • 14 software quality updates | <ul style="list-style-type: none"> • Sustainability • Compliance • Corrosion Prediction • Scale Prediction | <ul style="list-style-type: none"> • Metal Removal • Produced Water Pre-treatment • Toxic Contaminant Removal • Ion Exchange • Utility Water |

Boost Operational Efficiency, Reliability, and Compliance

Better predictions with new chemistry and expanded property predictions

- ✓ Improved **Scale Prediction** of fouling minerals
- ✓ New methods to reconcile inorganic carbon, alkalinity, and **TDS**
- ✓ Expanded database that includes natural organic matter and metal-organic complexes
- ✓ New chemistry modeling around selenium and arsenic

Optimize design and accelerate productivity with software created for water treatment






- ✓ Streamline data input and unit specifications makes for faster and simpler process design work
- ✓ Expanded properties list (TDS, Hardness, pH@25C) enables a more thorough interpretation
- ✓ Improved modeling of R/O, settlers, reactors, and virtual streams expands the range of water treatment design

Mitigate risk and enhance compliance with software enhancements

- ✓ Effectively model **contaminant** removal through first-principle separation mechanisms
- ✓ Model the fate of toxic elements using oxidation-reduction, adsorption and ion exchange
- ✓ More effective **stripping** and **scrubbing** operations; better **compliance** with regulations



Highlights of OLI Platform V10 applications in Industrial Water Treatment

| Metal Removal | Produced Water Pre-treatment | Toxic Contaminant Removal | Ion Exchange | Utility Water |
|---|---|---|--|---|
|  |  |  |  |  |
| Removal of Co, Pb, U, Cu, Ni | Degasifier system, warm lime softening, acid treatment | Elimination of selenium, arsenic, struvite, phosphorus | Selectivity of divalent ions, Dowex ion exchange, regeneration | Cooling towers scaling, corrosion; water softening |

New chemistries and software features in OLI Platform V10

| <i>New chemistries and data parameters</i> | <i>New and enhanced software features</i> |
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| <ul style="list-style-type: none"> Iron carbonate complexation Humic, fulvic, tannic and gallic acids Selenium, arsenic, and phosphate | <p>OLI Flowsheet: ESP</p> <ul style="list-style-type: none"> Ionic input of species RO unit operations Enhanced multistage column specifications Faster calculations: larger model handling capability Hardness, TDS, and pH calculation at standard conditions Virtual streams, and easier upfront unit configuration Recycle selection tool Call out property for at-a-glance insight <p>OLI Studio</p> <ul style="list-style-type: none"> Hardness calculation reported as liquid property Option to enable TDS as a rigorous calculation Updates to corrosion in high CO₂ concentrations |

Key Reasons to choose the OLI Platform for water chemistry simulations

- **Accurate corrosion** predication for a broad range of materials, conditions
- Accurate **desulphurization** simulation to ensure regulatory compliance
- Accurate, sustainable **industrial water treatment insights**
- Accurate **mineral scaling prediction** for a broad range of conditions
- Most versatile and flexible **simulation software** platform
- Proven capabilities across 500+ global deployments
- **Cloud and Digital Transformation** Roadmap

Learn more about OLI Platform V10

