

Finding a Planet-friendly Ink for Bioprinting

Dr. Rob Singer smiles as he examines a beaker filled with sludge from a paper mill's recovery boiler. What most people see as black, chemical waste looks more like a golden opportunity to the Saint Mary's University Chemistry professor – and to his collaborators at Thinking Robot Studios, a NS-based bio-medical products company.

Fuelling their optimism is a pulping byproduct called lignin. Dr. Singer and his team of researchers have funding through an NSERC Engage grant, coordinated by Saint Mary's Office of Innovation and Community Engagement, to assess the feasibility of local sources of lignin and other waste bio-mass for use in the full range of large-scale 3-D printers used by Thinking Robot Studios (TRS).

“TRS is at the forefront of a revolution in advanced manufacturing,” says Gregor Ash, Director of Global Projects for Thinking Robot Studios. “To stay ahead, we're collaborating with Saint Mary's University to develop greener, locally-sourced alternatives to current 3D-print materials.”

A leader in Green Chemistry, Dr. Singer sees great promise in the contribution of waste bio-mass to local, high tech manufacturing. “We're using something that's usually thrown away to supply the needs of a state-of-the-art manufacturer located right across the harbour,” he says. “It's a winning proposition.”

