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Cost, Space, Time: What Are The Limits For Publishable Structures? Lee M. Daniels, Ronald E. Benson, Joseph D. Ferrara, Katsunari Sasaki, Rigaku Americas Corp., 9009 New Trails Dr., The Woodlands, TX, 77381 USA.

Access to modern single-crystal diffraction experiments continues to be limited to those with the significant funding, laboratory facilities, training and time (or personnel) required for the techniques. Most of us would also hope to produce publishable material from such experiments. So what are the lower limits for cost, space, time and training that might enable access to the technique to a larger pool of scientists?

The accepted paradigm for single-crystal experiments might need to be suspended to reach some of these goals. In terms of cost and space, what can we do without and still produce acceptable results? In terms of time and training, how much automation can be implemented?

A side benefit of an affordable, minimal system for single-crystal diffraction is the ability to include the technique in undergraduate teaching situations. The new Rigaku SCXmini benchtop crystallography system will be described as a possible answer to these problems. Several examples of published or publishable structures from such a system are included as examples.