

What are (still) the requirements of the newest generation of laboratory diffractometers for single crystal X-ray structure determination of small molecules? OR: How to improve the quality of your crystals?

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As the capabilities of diffractometers for single crystal X-ray structure determination improve, the required crystal sizes decrease further and further. However, it is our experience that with even the newest generation of highest flux X-ray sources, combined with extremely sensitive and fast pixel detectors, the need for high quality crystals has not changed! Therefore, today's chemist still need to be able to grow crystals of a certain quality. Different methods of growing single crystals will be presented and compared.<sup>[1, 2]</sup> The emphasis will be on methods that only use a few milligrams of material, yet improve crystal quality, if at first only crystalline material was generated.

[1] B. Spingler, S. Schnidrig, T. Todorova, F. Wild, *CrystEngComm* **2012**, *14*, 751.

[2] P. P. Nievergelt, B. Spingler, *CrystEngComm* **2017**, *19*, 142.