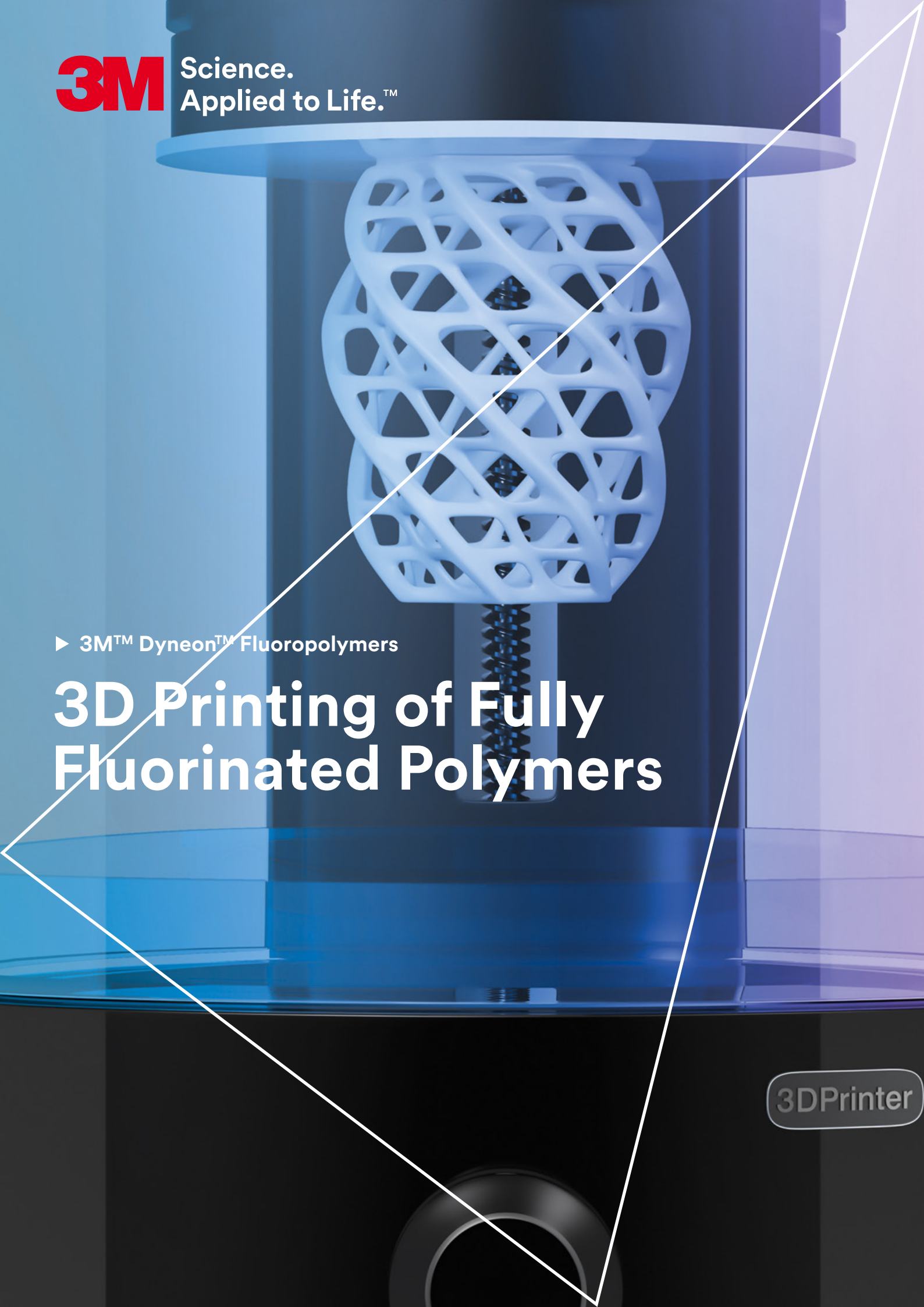
3M Science. Applied to Life.™



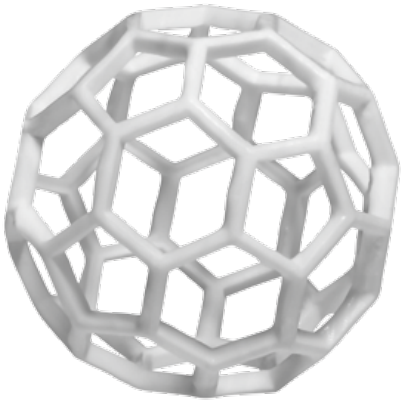
▶ 3M™ Dyneon™ Fluoropolymers

3D Printing of Fully Fluorinated Polymers

3D printing complements fluoropolymer processing

3M has developed a patent-pending technology to 3D print fully fluorinated polymers. This technology allows 3D printing as an additional and differentiated way of processing fully fluorinated polymers. In this way the fabrication of complex structures is possible, which otherwise cannot be produced or only produced with expensive traditional processing techniques. 3M is pioneering 3D printing with PTFE.

Benefits of processing fully fluorinated polymers via Additive Manufacturing



New design capabilities

- Almost unlimited geometric flexibility can lead to improved designs and potential weight reduction
- Adds function to design
- Faster response to customer inquiries
- Enables on demand supply of customized products

Enhanced product development cycle

- Accelerates and improves design iteration
- Eliminates the need for prototype tooling
- Reduces unit cost and lead time of small lot sizes

Cost savings opportunities

- Eliminates initial tooling and tooling maintenance costs
- Reduces assembly steps via printing integrated assemblies
- Generates less waste
- Reduces inventories by printing spare parts on demand

Generally suited for lower production volume and complex geometries.

Where to go for more information?

Europe
Dr.-Ing. Fee Zentis
fzentis@3M.com

Gerd Beul
gbeul1@3M.com

USA
Patrick Fischer
pjfischer@3M.com

Charles Gauker
cbgauker@3M.com

APAC
Patrick Fischer
pjfischer@3M.com

David Tarantino
dltarantino@3M.com

www.Dyneon.eu/3D-Printing

Dyneon GmbH
3M Advanced Materials Division
Carl-Schurz-Straße 1
41453 Neuss
Germany
Phone: +49 (0) 2131 14 22 65
Fax: +49 (0) 2131 14 38 57
www.dyneon.eu
dyneon.europe@mmm.com