

Purpose of publication

This publication is being created to widely introduce the achievements of research and development activities conducted by Nikon Corporation. This is a result of R&D based on Nikon's core technologies of "opto-electronics" and "precision" technologies that have been incorporated in new products and/or often valued by external organizations such as academic societies. At the end of the report, the papers presented and published by our engineers in the previous year are listed.

Foreword



Representative Director
President

Toshikazu Umatate

The COVID-19 pandemic, which spread throughout 2020, is still having an enormous impact around the world. It is causing many aspects of society to be rapidly transformed. While our Nikon Group is also facing the same circumstances, I do not believe that the direction of business and technology required as we advance into the future will fundamentally alter, but the schedule has just suddenly been pushed forward.

During this critical transformation period, it is essential that the Nikon Group responds to new business models and business processes that emerge from the combination of sensing technology, communication technology, and big data analysis technology. It is also important to realize advanced and automatic manufacturing in response to the shortage of manpower, increased labor costs and diversification of individual values. I believe it is vital to accurately identify the needs of society and fully comprehend what society really desires with tools that Nikon can provide for it. To successfully meet these demands, we must continuously increase the sophistication of our unique tools and services.

This report shares some of our successful achievements, such as the data analysis technology that innovates business processes and technology that realizes highly functional robots that can contribute towards advanced manufacturing.

General Manager
Research & Development Division

Kazuhiro Kido



As significant changes and constraints continue around the world, we urgently need technologies to handle such difficult situations. Development processes also require a completely different level of flexibility and alterations.

Especially in the first half of 2020, many academic conferences were forced to cancel due to restrictions on business activities around the world. This also prevented Nikon from carrying out experiments that are essential for research and development, while limiting the opportunities for showing our development results and exchanging information. However, regardless of such circumstances, we were able to steadily move forward by reviewing the research and development approach itself. This resulted in reflecting our achievements in our new products, which continue to satisfy the demands of society. Thanks to that, we were also highly evaluated at academic societies that have become active again in the latter half of 2020.

We will share the Nikon Group's research and development results for this year through this report, which contains technical explanations of products released in FY2020, and papers valued by external organizations during the same year. I hope that this report provides you with a deeper understanding of the technologies we are working on and opportunities for you to employ Nikon's technologies for the benefit of society.

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