



# AR NEWS

35<sup>th</sup> special issue, September 2017, Allresist GmbH



## Content:

1. Allresist is planning a new building extension again in the 25<sup>th</sup> year of its existence
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Welcome to the early 35<sup>th</sup> special issue of our AR NEWS! At the MNE 2017 in Braga, Portugal, we will present our new product developments on our own booth (A3) in the form of lectures and many posters. We are also pleased to keep all our readers updated with respect to the further development of our company and its ongoing research projects.

### 1. Allresist is planning a new building extension again in the 25<sup>th</sup> year

The economic development of Allresist which is based on the constant development of new innovative products and the acquisition of additional, large customers will once more necessitate another extension of our company building in 2018. This already initiated development process is, as often in our company, meanwhile accelerating rapidly. The construction work will be finished in the middle of 2018. A complex, well tuned planning of this building project ensures to all customers that production and delivery can be realised without any problems also during the construction phase.

### 2. New innovative product developments

The MNE conference 2017 is an important event for us. We are thus delighted to be able to present many new, innovative products to our customers and to all interested parties.

Resists **CSAR 62** and **Electra 92** which are already successfully introduced to the market reinforce their specific advantages by further possible applications. CSAR 62 is now also offered for layer thicknesses up to 1.5  $\mu\text{m}$ . Electra 92 is now also established as easy-to-handle conductive layer for SEM images.

The probably most important product development in 2017 is our **Atlas 46**. With this resist, we offer to very favourable conditions not only an alternative product to SU-8 (SX AR-N 4600S), but also developed on the other hand

the removable resist Atlas 46 (SX AR-N 4600R) which is particularly suitable for galvanic applications since this resist can be easily removed after the procedure. In addition, a further version of Atlas 46 is available which can be exposed at a wavelength of  $> \text{g-line}$  (436 nm). This particular feature allows a selective setup of multilayer structures.

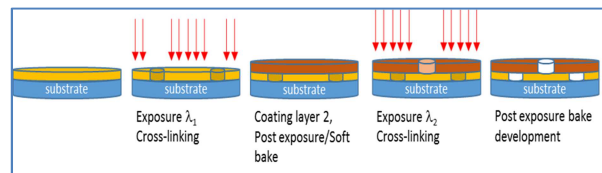


Fig. 1 Process 3D multilayer system Atlas 46

The results of the Atlas development will be presented at the MNE congress in a lecture and a poster. Completely new are also coloured resists. Distinguished are here dyed resists (by means of soluble dyes or coloured nanoparticles) and fluorescent resists which contain the corresponding fluorescent substances or quantum dots. For this development, an intensive and successful cooperation was established with Precision Optics Gera (POG).

We established an intensive and successful cooperation with the precision optics Gera.



Fig 2 Colour series of the negative resists

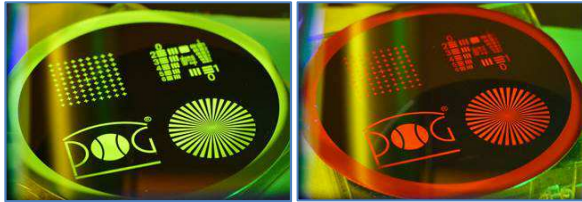


Fig 3 Fluorescent PMMA structures

The newly designed black resist is special with respect to its properties. Depending on the film thickness, this resist is characterised by a complete absorption in the spectral range of 300 to 750 nm and can nevertheless be well structured.

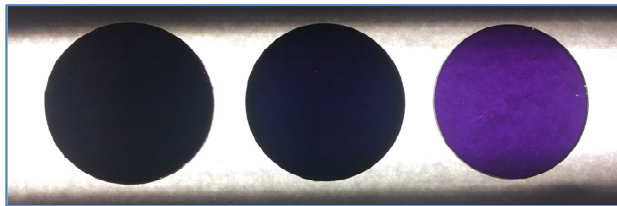


Fig. 4 Film thickness variations of the black resist

### 3. Scientific partnerships for the MNE 2017

A long, trusting and enormously successful cooperation connects us with the Martin-Luther-University (LMU) Halle where electron beam studies of CSAR 62 and Electra 92 were performed.

You are kindly invited to visit our booth at the **MNE 2017 in Braga, Portugal (18. – 21. September 2017)** and the **Semicon Europe 2017 in Munich (14. – 17. November 2017)**.

The next regular issue of the AR NEWS will be presented to you again in October 2017, our 25<sup>th</sup> anniversary. Until then, we wish you and us every success.

On the MNE 2017, the **MLU** presents a three-layer system for the production of T-gates using CSAR 62.

With **SwissLitho**, we are connected by the development of the NanoFrazor device for which we specifically developed resist Phoenix 81 as part of a Eurostars project. These results will also be presented on our booth at the MNE.

The EV Group (**EVG**) has, in addition to application-ready spray resists, particular interest in our black resist. This application is presented by EVG in an industrial talk at the MNE.

The Karlsruhe Institute of Technology (**KIT**) has tested CSAR 62 for 1.5  $\mu\text{m}$  layers and presents the results in a poster.

The properties of Atlas 46 in imprint applications were examined by the **TU Wuppertal** and are documented in a poster.

In many experiments, we could also rely on the fruitful cooperation with the Institute of Thin Film Technology and Microsensors Teltow (**IDM**) and the **Raith GmbH**.

We would like to thank all partners for having contributed to the successful preparations for the MNE.



Strausberg, 04.09.2017

Matthias & Brigitte Schirmer in the Allresist team