conclude that the designed carrier can be used as a part of packaging for two color detector. Our future work will be to improve our modified photodiodes presented in this paper in order to obtain better output characteristics.

IV. Conclusion

In this paper, we explored and developed two color detector based on silicon photodiodes. We modified IHTM photodiodes in order to allow mounting of one photodiode above another and easy thermocompression bonding to TO-5 housing. We fabricated special carrier for photodiodes using wet silicon etching in 25% TMAH water solution. Output currents of the produced two color detectors were measured by applying light with the wavelengths of 900 nm and 1060 nm. Performed measurements confirm usability of the new designed carrier for two color detector.

Acknowledgment

The authors acknowledge funding provided by the Institute of Chemistry, Technology and Metallurgy through a grant from the Ministry of Education, Science and Technological Development of the Republic of Serbia (Grant No. 451-03-68/2022-14/200026).

References

[1] www.ihtm.bg.ac.rs
[2] D.B. Ponomarev, V.A. Zakharenko, "Silicon photodiode as the two-color detector", *Journal of Physics: Conference Series*, Volume 643, 2nd International School and Conference Saint-Petersburg OPEN on Optoelectronics, Photonics, Engineering and Nanostructures (SPbOPEN2015), St Petersburg, Russia, 6–8 April 2015.
[3] www.osioptoelectronics.com
[4] www.hamamatsu.com
[5] M.M. Smiljanić, B. Radjenović, M. Radmilović-Radjenović, Ž. Lazić. V. Jović, "Simulation and experimental study of maskless convex corner compensation in TMAH water solution", *J. Micromech. Microeng.* 24115003, 2014.
[6] M.M. Smiljanić, B. Radjenović, M. Radmilović-Radjenović, Ž. Lazić. V. Jović, "Evolution of Si crystallographic planes-etching of square and circle patterns in 25 wt % TMAH", *Micromachines*10(2) 102, 2019.
[7] M.M. Smiljanić, Ž. Lazić, V. Jović, B. Radjenović, M. Radmilović-Radjenović, "Etching of Uncompensated Convex Corners with Sides along <n10> and <100> in 25 wt% TMAH at 80 °C", *Micromachines* 11(3), 253, 2020.

 ISBN 978-86-7466-930-3