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Amalgamations of commutative feebly clean-like rings

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# Abstract

We investigate the transfer of the feebly clean, feebly J-clean, and feebly nil-clean rings in the amalgamated algebras along an ideal. We put the transfer results in use to provide examples subject to the involved ring theoretic notions as well as to recover some previous results related to the transfer of these notions in other constructions such as trivial ring extension.

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# References

- Adarbeh, K., Kabbaj, S.: Trivial extensions subject to semi-regularity and semi-coherence. Quaest. Math.
   43, 45–54 (2020)
- 2. Adarbeh, K., Kabbaj, S.: Matlis' semiregularity in trivial ring ex-tensions issued from integral domains. Colloq. Math. **150**(2), 229–241 (2017)
- 3. Anderson, D.D., Winders, M.:Idealization of a module. J. Comm.Algebra 1(1), 3–56 (2009)
- 4. Arora, N., Kundu, S.: Commutative feebly clean rings. J. Algebra Appl.16(7), 1750128 (2017)
- **5.** Bakkari, C., Es-Saidi, M.: Nil-clean property in amalgamated algebras

along an ideal. Ann. Univ. Ferrara **65**(1), 15–20 (2019)

- 6. Chhiti, M., Mahdou, N., Tamekkante,M.: Clean property in amalgamated algebras along an ideal. Hacet. J.Math. Stat. 44(1), 41–49 (2015)
- 7. Danchev, P.V.: Feebly J-Clean Unital Rings. Int. J. Algebra 11(6), 287–290 (2017)
- 8. Danchev, P.V.: Weakly semi-boolean unital rings. JP J. Algebra, Number Theory and Appl. **39**(3), 261–276 (2017)
- 9. Danchev, P.V.: Feebly nil-clean unital rings. Proc. Jangjeon Math. Soc.21(1), 155–165 (2018)
- 10. Danchev, P.V.: Commutative feebly nil-clean group rings. Acta Univ.

Sapientiae, Math. **11**(2), 264–270 (2019)

- 11. Danchev, P.V., McGovern, W Wm.:
  Commutative weakly nil clean unital rings. J. Algebra **425**(5), 410–422
  (2015)
- 12. D'Anna, M., Finocchiaro, C.A.,
  Fontana, M.: Amalgamated algebras
  along an ideal. In: Commutative
  Algebra and Applications,
  Proceedings of the Fifth
  International Fez Conference on
  Commutative Algebra and
  Applications, Fez, Morocco, 2008,
  W. de Gruyter Publisher, Berlin
  (2009), 155–172
- 13. Diesl, A.J.: Nil clean rings. J. Algebra **383**, 197–211 (2013)
- 14. D'Anna, M., Finocchiaro, C.A., Fontana, M.: New Algebraic

Properties of an Amalgamated Algebra Along an Ideal. Comm. Algebra **44**(5), 1836–1851 (2016)

- 15. D'Anna, M., Finacchiaro, C.A., Fontana, M.: Properties of chains of prime ideals in amalgamated algebras along an ideal. J. Pure Appl. Algebra 214, 1633–1641 (2010)
- 16. D'Anna, M.: A construction of Gorenstein rings. J. Algebra **306**, 507–519 (2006)
- 17. D'Anna, M., Fontana, M.: The amalgamated duplication of a ring along a multiplicative-canonical ideal. Ark. Mat. 45, 241–252 (2007)
- 18. D'Anna, M., Fontana, M.: An amalgamated duplication of a ring along an ideal: the basic properties.

  J. Algebra Appl. **6**(3), 443–459

  (2007)

- 19. Huckaba, J.A.: Commutative rings with zero divisors, Monographs and Textbooks in Pure and Applied Mathematics 117, Marcel Dekker, Inc., New York (1988)
- 20. Mimouni, A.: Clean-like properties in pullbacks and amalgamation rings. Acta Math. Hungar. **156**, 91–101 (2018)
- 21. Nicholson, W.K.: Lifting idempotents and exchange rings.Trans. Amer. Math. Soc. 229, 269–278 (1977)
- 22. Nicholson, W.K., Zhou, Y.: Clean general rings. J. Algebra 291, 297–311 (2005)

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#### Ethics declarations

Conflicts of interest

The authors have no conflicts of interest to declare. The co-authors has seen and agree with the contents of the manuscript and there is no financial interest to report. We certify that the submission is original work and is not under review at any other publication.

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