



PAUL WIEGAND
TAPPI Journal
Editorial Board

“Didn’t know we knew that” – Rediscovering the fundamentals

Access to today’s extensive electronic information archives is certainly an amazing feat of technology. Nonetheless, it can sometimes be difficult to find pulp and paper industry process-specific resources that are easily digestible and tailored to help us in our day-to-day work. This brief editorial is intended to help address a portion of this challenge by pointing out some resources that might be less familiar to some of the industry’s newer staff yet contain important information that can be applied in everyday operations at pulp and paper mills.

Review articles accelerate learning curve

An example of one type of resource appeared in the March 2022 issue of *TAPPI Journal*. In this case, the title of the article was “Considerations in managing wastewater odor at pulp and paper operations.” If you perused it, you will have realized that it is one of

several articles of a similar type published in recent years and that my fellow editors and I refer to as “review articles.” These types of articles appear in *TAPPI Journal* from time to time and are intended to provide a high-level overview of the practical fundamentals needed to either improve one’s ability to properly control and operate a process or to effectively troubleshoot and improve process operations. Articles like this are purposely designed to accelerate the learning curve for new-to-position technical and operational staff at mills, and as a refresher for more seasoned staff.

In looking over *TAPPI Journal* issues published in the past decade, it occurred to me that not all the review articles are easily identified by their title. Thus, it seemed worthwhile to highlight some of them, and these are identified in **Table I**. Indeed, important operational concepts are part of virtually every article published in this journal, but those listed in the table

Topic	Issue	DOI
Anthraquinone	October 2014	https://doi.org/10.32964/tj13.10.23
Beneficial utilization of mill residuals	February 2022	https://doi.org/10.32964/tj21.2.83
Brownstock washing	February 2013, January 2014, and March 2014	https://doi.org/10.32964/tj12.2.69 https://doi.org/10.32964/tj13.1.9 https://doi.org/10.32964/tj13.3.55
Corrosion	May 2018	https://doi.org/10.32964/tj17.5.253
Eucalyptus pulps	June 2015	https://doi.org/10.32964/tj14.6.353
“Green” lime kiln fuels (I and II)	May 2020	https://doi.org/10.32964/TJ19.5.263 https://doi.org/10.32964/TJ19.5.271
Green liquor scale formation	October 2018	https://doi.org/10.32964/tj17.10.571
High kappa pulping	October 2014	https://doi.org/10.32964/tj13.10.33
Paper machine performance and conductivity	October 2017	https://doi.org/10.32964/tj16.10.567
Smelt runoff phenomena	January 2015	https://doi.org/10.32964/tj14.1.41
Soda loss and conductivity	February 2017	https://doi.org/10.32964/tj16.2.65
Wastewater aeration	June 2015	https://doi.org/10.32964/tj14.6.405
Wastewater nutrient management	November 2014	https://doi.org/10.32964/tj13.11.9

I. Selected review articles published in TAPPI Journal 2012 to present.

have a broader purpose that many will find helpful as they operate or observe process operations throughout the mill.

Outside of *TAPPI Journal* and TAPPI Conference Proceedings, there are a number of other long-proven and electronically accessible resources that some newer mill staff may not yet be aware of and more seasoned staff may have forgotten. Among them are library archives maintained specifically on forest products industry topics. These include the libraries kept at the Forest Products Laboratory in Madison, WI, [1] and the Renewable Bioproducts Institute at Georgia Institute of Technology in Atlanta that maintains the previous holdings of the Institute of Paper Science and Technology [2]. A pulp and paper research database referred to as PaperChem is also maintained and is accessible at several university libraries, including North Carolina State University [3], Georgia Tech, and others.

Finally, I'd be remiss to not mention a few journals that have a long history of publishing pulp and

papermaking research. These include *Nordic Pulp* and *Paper Research Journal* [4], *Journal of Wood Chemistry and Technology* [5], *BioResources* [6], and *Holzforschung* [7]. The list of resources mentioned here is certainly not comprehensive but does represent a good starting place when searching for pulp and paper process-specific information. **TJ**

Paul Wiegand is a member of the TAPPI Journal Editorial Board and is vice president, Water Resources and Laboratory Operations, for the National Council for Air and Stream Improvement (NCASI) in Cary, NC, USA.

References

1. <https://usforestserv.on.worldcat.org/discovery>
2. <https://smartech.gatech.edu/handle/1853/123>
3. <https://www.lib.ncsu.edu/databases/paperchem>
4. <https://www.degruyter.com/journal/key/nppri/html?lang=en>
5. <https://www.tandfonline.com/journals/lwct20>
6. <https://bioresources.cnr.ncsu.edu/>
7. <https://www.degruyter.com/journal/key/hfsg/html>

Revisiting the classics in *TAPPI Journal*

MONICA SHAW, Editorial Director

As Editorial Board Member Paul Wiegand describes in the preceding editorial regarding review papers, *TAPPI Journal (TJ)* has provided a wealth of information over the years that is helpful to those in both new and established positions in our industry. In many of our regular meetings, the Editorial Board has noted the importance of certain “classic” *TJ* papers that are as important and relevant today as ever, but may only be accessible through those libraries and institutions that Paul mentions in his editorial. In fact, we published one of these papers in the October 2018 issue written by D.H. Page, “A theory for the tensile strength of paper.” Editor-in-Chief Douglas Coffin wrote an editorial on the importance of the “Page equation” to Paper Physics in that issue.

In this issue, we revisit more of those classic papers, starting with “Ultrastructural behavior of cell wall polysaccharides,” by Dietrich Fengel from the March 1970 issue. According to J.Y. Zhu of the Editorial Board, “The Fengel paper provided a classic wood cell wall model that is still used today and lays the foundation for developing more accurate cell wall models.”

Also in this issue is “The chemistry of aluminum salts in papermaking,” by Thomas R. Arnson from the March 1982 issue. According to Gerard Ring of the Editorial Board, “Arnson’s paper demonstrated the pH range at which the highly charged polynuclear aluminum species forms in acid rosin sizing and precipitates onto fiber surfaces. This paper also assisted in the understanding of the manner by which rosin flocs could migrate and uniformly distribute over fiber surfaces. Consequently, the use of aluminum chemistry could be applied to a wide range of papermaking applications.”

In the future, we will digitize and publish more of these important historical papers as selected by the *TAPPI Journal* Editorial Board, along with providing their DOI information at the bottom of pages.

