



❖ **DATOS PERSONALES**

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❖ **FORMACIÓN ACADÉMICA**

- Doctor en Ingeniería, Campo disciplinario: Ingeniería Química, Área: Metalurgia. Universidad Nacional Autónoma de México.
- Maestro en Ingeniería, Campo disciplinario: Ingeniería Química, Área: Metalurgia. Universidad Nacional Autónoma de México.
- Ingeniero Químico Metalúrgico. Universidad Nacional Autónoma de México.

❖ **POSICIÓN ACTUAL**

- Profesor–Investigador

❖ **LÍNEAS DE INVESTIGACIÓN**

- Transformaciones de fase en materiales metálicos
- Fragilización por hidrógeno
- Corrosión

❖ **PUBLICACIONES**

Artículos

- Oliver-Reynoso, A., Vázquez-Gómez, O., Reyes-Calderón, F., Vergara-Hernández, H. J., Herrejón-Escutia, M., Dávila-Pérez, M. I., & López-Martínez, E. (2025). Kinetics of austenite formation during continuous heating in as-cast and as-annealed conditions in a low carbon steel. *Materials Research Express*, 12(2), 026502. [10.1088/2053-1591/adaf78](https://doi.org/10.1088/2053-1591/adaf78)
- Guzmán-Garfías, R., Vázquez-Gómez, O., Vergara-Hernández, H. J., Garnica-González, P., & López-Martínez, E. (2025). Dilatometric analysis of an experimental medium-carbon steel alloyed with Si-Mo-V. *MRS Advances*, 1–6. <https://doi.org/10.1557/S43580-024-01084-9/>
- Díaz-Villaseñor, P. G., Vázquez-Gómez, O., Garnica-González, P., Vergara-Hernández, H. J., Campillo-Illanes, B., & López-Martínez, E. (2024). Secondary hardening in an Cr-Mo-V steel: Effect of thermal cycle tempering. *Materials Science and Technology*, 40(14), 1-11. <https://doi.org/10.1177/02670836241238111>

- Barrera-Villatoro, E. F., Vázquez-Gómez, O., Vergara-Hernández, H. J., Gallegos-Pérez, A. I., López-Martínez, E., Díaz-Villaseñor, P. G., & Garnica-González, P. (2023). Non-isothermal tempering kinetics in a Cr–Mo–V medium-carbon low-alloy steel: a modeling proposal. *Journal of Thermal Analysis and Calorimetry*, 148(24), 13791–13802. <https://doi.org/10.1007/S10973-023-12659-3>
- Chávez-Campos, P. N., Vázquez-Gómez, O., Vergara-Hernández, H. J., Chávez-Campos, G. M., Herrejón-Escutia, M., & López-Martínez, E. (2023). Effect of thickness and chemical composition on thermal resistance of steel dilatometric specimens under heating-cooling cycles by Joule heating. *Materialwissenschaft Und Werkstofftechnik*, 54(1), 27–35. <https://doi.org/10.1002/MAWE.202200137>
- Barraza-Fierro, J. I., López-Martínez, E., Vázquez-Gómez, O., Galicia-García, M., Cruz-Mejía, H., & Villalobos, J. C. (2023). Modeling Electrochemical Impedance Spectroscopy Results of Cu and Cu-Thiosemicarbazide-Boron Nitride Nanosheets Electrodes in 3.5 wt% NaCl Solution, Based on an Electrochemical Reaction Mechanism. *Crystals*, 13(5), 809. <https://doi.org/10.3390/CRYST13050809>
- Alanis-Fuerte, I., Garnica-González, P., Lopez-Martínez, E., Vergara-Hernández, H. J., & Vázquez-Gómez, O. (2022). Effect of Cold-rolling and Heating Rate on Austenite Formation in a Low–Carbon Steel. *ISIJ International*, 62(1), 227–236. <https://doi.org/10.2355/ISIJINTERNATIONAL.ISIJINT-2021-294>
- Dávila-Pérez, M. I., Reyes-Calderón, F., Vázquez-Gómez, O., Vergara-Hernández, H. J., Villalobos, J. C., & López-Martínez, E. (2022). Hydrogen permeation in a Cr–Mo–V medium-carbon steel: Effect of the quenching medium and tempering temperature. *International Journal of Hydrogen Energy*, 47(77), 33105–33111. <https://doi.org/10.1016/J.IJHYDENE.2022.07.191>
- Gallegos-Pérez, A. I., Vázquez-Gómez, O., Herrejón-Escutia, M., Vergara-Hernández, H. J., Arreola-Villa, S. A., Garnica-González, P., & López-Martínez, E. (2022). Application of a Non-Isothermal Numerical-Analytical Model to Determine the Kinetics of Austenite Formation in a Silicon Alloyed Steel. *Materials*, 15(4), 1376. <https://doi.org/10.3390/MA15041376>
- Dávila-Pérez, M. I., Vergara-Hernández, H. J., Vázquez-Gómez, O., Reyes-Calderón, F., López-Martínez, E., & Salgado-López, J. M. (2021). Application of a new reagent for analysis of oxygen presence in a low-carbon steel wire rod. *Journal of Iron and Steel Research International*, 28(6), 729–738. <https://doi.org/10.1007/S42243-020-00537-3>
- Vázquez-Gómez, O., Gallegos-Pérez, A. I., López-Martínez, E., Vergara-Hernández, H. J., & Barrera-Godínez, J. A. (2019). Criteria for the dilatometric analysis to determine the transformation kinetics during continuous heating. *Journal of Thermal Analysis and Calorimetry*, 135(6), 2985–2993. <https://doi.org/10.1007/s10973-018-7449-7>

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- López-Martínez, E., Garzón-Bonetti, D., Vázquez-Gómez, O., Garnica-González, P., & Campillo, B. (2019). Estimation of Residual Stresses by Nanoindentation in an Experimental High Strength Microalloyed Steel Subjected to Rapid Thermal Cycles. *Journal of Materials Engineering and Performance*, 28(12), 7324-7331. <https://doi.org/10.1007/s11665-019-04467-4>
- López-Martínez, E., Vázquez-Gómez, O., Vergara-Hernández, H. J., & Campillo, B. (2018). Hydrogen assisted cracking in a microalloyed steel subjected to a rapid thermal cycle at high temperature. *Archives of Metallurgy and Materials*, 63(1), 315-321. <https://doi.org/10.24425/118943>
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- Herrejón-Escutia, M., Solorio-Díaz, G., Vergara-Hernández, H. J., López-Martínez, E., Chávez-Campos, G. M., & Vázquez-Gómez, O. (2017). Electric-thermo-mechanical analysis of joule heating in dilatometric specimens. *Strojniski Vestnik/Journal of Mechanical Engineering*, 63(9), 537-547. <https://doi.org/10.5545/sv-jme.2017.4320>
- López-Martínez, E., Vázquez-Gómez, O., Vergara-Hernández, H. J., Serna, S., & Campillo, B. (2016). Mechanical characterization of the welding of two experimental HSLA steels by microhardness and nanoindentation tests. *Metals and Materials International*, 22(6), 987-994. <https://doi.org/10.1007/s12540-016-6271-7>
- López-Martínez, E., Vázquez-Gómez, O., Vergara-Hernández, H. J., & Campillo, B. (2015). Effect of initial microstructure on austenite formation kinetics in high-strength experimental microalloyed steels. *International Journal of Minerals, Metallurgy and Materials*, 22(12), 1304-1312. <https://doi.org/10.1007/s12613-015-1198-4>
- López-Martínez, E., Vergara-Hernández, H. J., Flores, O., & Campillo, B. (2015). Hydrogen Diffusivity in the Welding Zone of Two High Strength Experimental Microalloyed Steels. *ISIJ International*, 55(11), 2435-2442. <https://doi.org/10.2355/isijinternational.isijint-2015-259>
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- Díaz-Villaseñor, P. G., López-Martínez, E., Vázquez-Gómez, O., Garnica-González, P., & Vergara-Hernández, H. J. (2023). Use of the Hollomon-Jaffe Tempering Parameter to Optimize the Microhardness in a Medium Carbon Low Alloy Cr–Mo Steel. En *The Minerals, Metals and Materials Series* (pp. 1331–1338). Springer, Cham. https://doi.org/10.1007/978-3-031-22524-6_129
- Díaz-Villaseñor, P. G., Vázquez-Gómez, O., Vergara-Hernández, H. J., Gallegos-Pérez, A. I., López-Martínez, E., & Campillo, B. (2021). Thermal and Mechanical Characterization of Non-isothermal Tempering of an Experimental Medium-Carbon Steel. En *The Minerals, Metals & Materials Society (eds) TMS 2021 150th Annual Meeting & Exhibition Supplemental Proceedings* (pp. 909–918). Springer, Cham. https://doi.org/10.1007/978-3-030-65261-6_81
- Barajas-Miguel, C., Vázquez-Gómez, O., Oliver-Reynoso, A., López-Martínez, E., & Vergara-Hernández, H. J. (2021). Effect of Cooling Rate and Austenitic Grain Size on the Austenite Decomposition Kinetics in a Low-Carbon Steel. En A. for I. & S. Technology (Ed.), *Steel Properties & Applications in conjunction with Materials Science & Technology 2021* (pp. 29–38). Association for Iron & Steel Technology. <https://doi.org/10.33313/280/004>
- Barrera-Villatoro, E. F., Vázquez-Gómez, O., Gallegos-Pérez, A. I., Vergara-Hernández, H. J., López-Martínez, E., & Garnica-González, P. (2021). Dilatometric Analysis of Tempering Kinetics in a Cr–Mo–V Medium-Carbon Steel. En *The*

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- Díaz-Villaseñor, P. G., Vázquez-Gómez, O., Barrera-Villatoro, E. F., Vergara-Hernández, H. J., López-Martínez, E., & Campillo, B. (2020). Dilatometric Analysis of the Martensite Decomposition by Stages During Continuous Heating. En TMS 2020 149th Annual Meeting & Exhibition Supplemental Proceedings. The Minerals, Metals & Materials Series (pp. 1861-1870). Springer, Cham.
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- Gallegos Pérez, A. I., Vázquez Gómez, O., López Soria, J. J., Vergara Hernández, H. J., & López Martínez, E. (2019). Effect of Silicon Content on the Dilatometric Behavior of a Medium-Carbon Steel. En TMS 2019 148th Annual Meeting & Exhibition Supplemental Proceedings (pp. 1389–1400). Springer, Cham.
https://doi.org/10.1007/978-3-030-05861-6_132
- Vázquez-Gómez, O., López-Martínez, E., Gallegos-Pérez, A. I., Santoyo-Avilés, H., Vergara-Hernández, H. J., & Campillo, B. (2017). Kinetic study of the austenite decomposition during continuous cooling in a welding steel. En Meyers, M., et al. Proceedings of the 3rd Pan American Materials Congress. The Minerals, Metals & Materials Series (pp 749-760) Springer, Cham. https://doi.org/10.1007/978-3-319-52132-9_74

❖ **SIMPOSIA, CONGRESOS, FOROS Y CONFERENCIAS**